

CONSUMERS UNION *Reports*

Volume 3, Number 10

OCTOBER 1938

\$3 a Year, 25c a Copy



To The Winner: A 1939 Car

CU announces a unique contest for all CU members . . . with a new Plymouth or Chevrolet as First Prize . . . with dozens of other valuable rewards. The object: to spread the story of CU that the press of America is afraid to let us tell.

ALKALIZERS
A Doctor Talks Facts

AUTO TIRES
Ratings of 15 Brands

FOOD MIXERS
Test Results on Eight

CONSUMERS UNION OF UNITED STATES, INC.

55 VANDAM ST.

NEW YORK CITY

In This Issue

CU's ratings of products are based on both quality and price. A product rated "Also Acceptable" may be of higher quality than one rated "Best Buy" but the "Best Buy" will normally give greater return per dollar. In most cases a product rated "Not Acceptable" is judged not worth buying at any price, because of inferior quality or because it is potentially harmful. Products rated "Not Acceptable" for more specific reasons are so noted.

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Photographs taken for CU by John Mills

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CONSUMERS UNION is operated on a strictly non-profit basis under the Membership Corporation laws of New York State. Its income is derived from members' fees and from small contributions by members. It has no connection with any commercial interest.

Consumers Union's own technicians conduct many of the tests and investigations on which ratings are based. The greater part of the testing, however, is done by consultants—more than 200 specialists selected for their competence and freedom from commercial bias—in university, governmental and private laboratories.

Samples for test are in almost all cases bought on the open market. Whenever time and the nature of the product allow, testing is done by actual use trials as well as by laboratory analyses.

Supplementary labor reports are published regularly. Entirely independent of the technical reports, these do not affect ratings.

CONSUMERS UNION publishes two monthly editions of the *Reports*—full and limited. The full edition contains reports on many higher-priced products not carried in the limited.

Members receive also an annual *Buying Guide* (full or limited)—a compact booklet designed for quick reference in shopping.

Membership fees are \$3, of which \$2.50 is for subscription to the full edition; or \$1, of which \$.60 is for subscription to the limited. Reduced group fees are available to students, members of trade unions, consumer clubs and other organizations.

All members have the right to vote on candidates for the Board of Directors and on resolutions on policy at the annual meetings.

The Consumer Reporter

Health note of the month: "That poverty was the greatest single cause of bad sanitary conditions was very early impressed upon me. If I should again go into a community, such as Cuba or Panama, and were allowed to select only one sanitary measure, but were, at the same time, given power to choose from all sanitary measures, I would select that of doubling wages."—Former Surgeon-General Gorgas (who cleaned up the Panama Canal site).

Japan, like its spiritual brother States, Germany and Italy, has gone on rations. Rubber must not be used for toy balloons. To save textiles neckties are pronounced "unpatriotic." Meatless and tobaccoless days are becoming common. And since shoe leather is scarce, authorities may ban all shoes and order the people back to the primitive "settas," the sandals with wooden-slab soles of a century ago.

Latest product of Japan's masterminds is a provision for shortening the matchstick! One labor press commentator suggests that the estimated saving—\$290,000 a year—will maintain the Japanese army in China for an hour.

The anti-Japanese boycott may be spurred on, though not immediately, by a new synthetic rayon yarn recently announced by the Du Pont Co. Compounded of castor oil and coal, the new product is claimed to have an elasticity of 60%, which compares very favorably with that of silk—75%.

If Du Pont doesn't make its customers pay too dearly for its ingenuity, the new product's eventual appearance will be significant. As the *New York Times* states: "If stockings of elastic rayon are to undersell those of silk, [Japan] has reason to worry about the effect on her industry, her market and her internal labor situation." CU will test the claims of the new yarn if and when stockings made of it appear on the market.

The Du Pont Co. must, of course, charge all the traffic will bear in order to pay their employees a living wage. That is, some 41 of their employees. This number of top officials last year received bonuses totalling \$2,332,400.

Standing out in rare contrast is the notable act of John and Mack Rust, inventors of the mechanical cotton picker. These two, who could admittedly make millions in "bonuses" à la Du Pont, have formed the Rust Foundation to aid those displaced by their machine. Their charter limits their personal income to 10 times that of their lowest paid employee and all income above that goes to the Foundation. "We have never intended our invention for making money, but to better the condition of Southern workers," explain the admirable Rusts.

Although the idea of burial co-ops is quite new, there are now 42 with an estimated membership of 27,000 persons in five Mid-Western States alone. The co-ops are reported to have cut the average cost per funeral to \$175, a reduction of 40% to 50% over the rates of private-profit undertakers. In Minnesota, the latter sought unsuccessfully to stop the co-ops in a suit contending that burial co-ops are not legal because they do not serve the ultimate consumer!

No bad conscience afflicts the mind of the ardent biographer of one of America's most successful advertising men, Mr. O. B. Winters. Obie (as the boys in the trade know him) is the fellow who writes the advertising copy to make you buy things you don't need at prices you shouldn't, or can't, afford. As his biographer proudly tells in *Advertising and Selling*: "Winters found the 'Four out of Five' idea buried in fine type in an early Forhan's ad. He shoved it into headlines and Forhan's went to town. When complaints went in to the Federal Trade Commission that this high incidence of pyorrhea was only among people over 40, Obie went blithely ahead with 'FOUR OUT OF FIVE . . . people over 40,' with the last three words set in small type." Whimsical fellows, these advertising agents.

CONSUMERS UNION IS SPONSORED BY MORE THAN 70 EDUCATORS, AUTHORS, SOCIAL WORKERS AND SCIENTISTS. NAMES OF THESE SPONSORS ARE AVAILABLE ON REQUEST

Be Wise—DON'T "Alkalize"

In which a physician examines some of the false notions about "acidosis" and explains why only in certain serious illnesses does a person need to "alkalize"

by HAROLD AARON, M.D.

THE discoveries of medical science in the past two or three decades have followed one another in breathtaking succession. The alert physician has been hard pressed to assimilate them; the lay public is usually bewildered. Even when certain fundamental concepts about the body have long been established, it may take years before some real understanding of them is obtained. Moreover, popular health education is made far more difficult than it should be by the tremendous volume of patent-medicine advertising to which the public is exposed.

Consider the condition known as "acidosis." The facts about it have been known for more than a decade. But misleading, false or exaggerated advertising has played mischief with the public's notions on the subject. And false notions have had their effect—a bad one—on the public's health and finances.

The idea of a harmful "acid" condition of the body gained prominence some years ago when physicians began to recognize that in certain serious ailments—diabetes and kidney disease, for example—an accumulation of acid substances took place. As almost invariably happens, this discovery was soon being applied uncritically to a host of everyday, commonplace disorders, and soon giving rise to such expressions as "acid in the blood" and "acid skin."

When it was discovered that in certain stomach disorders the acid normally present in the stomach secretions increased in volume, it could almost have been predicted that any kind of pain in the abdomen or any disturbance in stomach function would sooner or later be attributed to the excess acid. And, in fact, "hyperacidity" did become a disorder as virulent and as well promoted as "acid in the blood."

So the consumer is urged to "Keep

on the Alkaline Side," "Be Wise—Alkalize," "Combat Acidity or Hyperacidity," "Relieve Acid Indigestion," "Correct Acid Skin," wear "alkalizing innersoles" and suck on the "alkaline factor" in a cough drop. To add to the confusion of the public, the New York State Bureau of Milk Publicity, an organ of the people of that State, urges the consumer to drink milk because of its "alkaline effect."

AT the outset it can be stated that the blood of a healthy person is no more in need of "alkalizing" to keep it healthy than the eyes need an eyewash to keep them moist; that with the common cold or gripe, and with functional disorders such as constipation, there is no accumulation of acid; that fatigue, a "dark brown" taste, a foggy feeling, jitters or headache are not in the slightest extent caused by "acids in the blood," "acidity" or acidosis; and that only in certain

specific serious disorders, such as severe diabetes or nephritis, severe diarrhea or starvation, or certain severe infections, does acid intoxication threaten or occur. When it does, something more than an "alkalizer" is needed.

These facts become clear if it is realized that the reaction of the blood and tissues is one of the most constant things in the life of an organism. In man, this reaction is normally slightly alkaline and it is kept so from conception to death by a number of delicate mechanisms. Any appreciable change in the reaction either to the acid or the alkaline side will lead to serious symptoms or death.

Fortunately, because the body possesses remarkable natural defenses against both acids and alkalis, such changes occur rarely—usually only in the serious disorders mentioned above.

The first line of defense against acid intoxication is the sodium bicarbonate normally present in the blood, lymph and tissue fluids of every human being, similar to the sodium bicarbonate that you buy. This store of bicarbonate is part of what is known as the "alkaline reserve." It is also called "buffer" substance, derived from the German word meaning tampon. And it is appropriately named because, like a tampon, it mops up acids, neutralizes them and thus prevents them from accumulating in the body.

The protein material present in all living cells of the body is also a part of the alkaline reserve, forming a second line of defense in the prevention of acid intoxication.

A third and more important defense is breathing. While the main and obvious purpose of breathing is to take in oxygen and to get rid of the waste carbon dioxide, another purpose is to maintain the normal blood reaction. The vital center in the brain that regulates respiration is so sensitive that it can detect changes in the reaction of the blood more promptly and more delicately than the finest physical instruments, even before you could say "Alka-Seltzer." And the slightest change in the blood reaction immediately brings this center into action.

If the change is toward acid, the respirations deepen and quicken and more carbonic acid or carbon dioxide is expelled. Deep and rapid respira-

Reports to Come

CU is currently conducting tests on a number of important commodities. Among reports scheduled for early issues are the following:

CHILDREN'S SNOWSUITS
RADIO RECEIVING SETS
RADIO-PHONOGRAPH COMBINATIONS
FRUIT JUICES
ANTI-FREEZE SOLUTIONS
INFANT FOODS
ROUGE
1939 AUTOMOBILES
AUTOMOBILE HEATERS
JAMS, PRESERVES AND MARMALADES
HAIR DYES



HOPE SPRINGS ETERNAL AT THE SODA FOUNTAIN

But it won't do her any good

tions, in fact, are among the most prominent and characteristic signs of true acidosis. (Prostration and coma are other symptoms present—the picture of true acidosis is thus far removed from that drawn by patent-medicine advertising.) If the change is toward more alkalinity than normal, the respirations slacken and carbonic acid is retained to neutralize the excess alkali.

If, finally, there is a tendency to acid accumulation, the kidneys will excrete acid. If there is a tendency to excessive alkali accumulation, the kidneys will excrete alkali. More than this, when acidosis threatens, the kidneys can even manufacture alkali to aid the bicarbonate of the blood.

OTHER organs and tissues also play a part in the maintenance of a constant acid-alkaline equilibrium, but those we have mentioned are most important. The net truth is that there is no need whatsoever for an individual to take *White Rock* or *Alka-Seltzer* or any other such substance to keep himself alkaline. Any tendency to acidosis is at once checked by the numerous de-

fenses that the body possesses—with the few exceptions that have been mentioned.

The most that the so-called “alkalizers” can do is to furnish a palatable drink. And the stimulation which a person may get from an effervescent fluid is no test of its medical value. When these remedies contain aspirin (*Alka-Seltzer*) or acetanilid (*Bromo-Seltzer*) they may relieve some of the aches and pains accompanying a cold, grippe or flu. But the relief is due to the analgesic (pain-relieving) drug and not to any “alkalizing” tendency. In sensitive people, however, or when taken in large amounts or over long periods, these drugs (aspirin, acetanilid or others) can cause serious toxic effects; they have no power to prevent, check or cure the illnesses.

As for constipation, it is neither due to nor accompanied by acidosis. If the symptoms of this condition were caused by an “acid” condition or “acidity,” they would be relieved by taking an alkaline powder, instead of by a bowel movement.

Nor are the symptoms of “the morning after” in any way related to a

state of acidosis. Many of these symptoms are due to gastric irritation, and the relief that an alkaline effervescent drink affords is largely due to the sedative effect of charged water on the mucous membrane of the stomach. A glass of plain carbonated water would in a great many cases have a similar effect.

Alcohol does produce, however, an increase in the acid secretion of the stomach in some people. Of this “hyperacidity” we shall have more to say in a further article; for the present it is worth emphasizing that it is entirely different from acidosis. Hyperacidity is a local condition of the stomach, while acidosis is a general, systemic condition.

That eczema and hives have nothing to do with a state of acidosis, although they have been associated with “too much acid in the blood,” has long been known. Both of these skin disorders are frequently caused by a hypersensitivity of the skin to certain substances present in the environment or in food or drink. Hives, for example, may be caused by sensitivity to tomatoes, not because the tomato is an “acid food,” but because it contains a specific substance capable of exciting a skin disorder in a sensitive person.

THE matter of acid and alkaline foods has confused many people. The diet fads and fancies of quacks and “food scientists” are in the main responsible for this confusion. From the chemical point of view foods can be classified according to the nature of their mineral content. Some foods—nuts, fruits and vegetables—furnish alkaline minerals. Other foods—meat, fish, eggs, bread, corn and rice—furnish acid minerals. Such foods as sugar, starch, fats and oils furnish no minerals and are therefore considered neutral foods.

The commonly so-called acid fruits, such as oranges, lemons, grapefruit and tomatoes, do contain acids, but they are weak, organic acids, quickly and easily oxidized or burned in the body. The mineral residue of these fruits, remaining after the oxidation is completed, is slightly alkaline in reaction.

In the average mixed diet, the acid and alkaline foods are well balanced. Even when the diet consists chiefly or almost exclusively of one or the other, no disturbance in the reaction of the

blood or tissues will result. It is only when the diet is one-sided for weeks or months that acidosis or alkalosis will occur. Usually the digestive tract will rebel at the one-sidedness of the diet before that happens.

Scientific evidence indicates, therefore, that the question of acid- and alkali-forming foods is a negligible one in human dietetics.

So much for the value of "alkalizing" for everyday health and for the great majority of illnesses. The futility of doing so is well established. But the potential seriousness of excessive "alkalizing" is also well established. It is especially in the treatment of so-called "acid indigestion" or "hyperacidity" that harm can occur. The effects of superfluous alkalies upon the contents of the stomach and upon the blood and tissues of the body will be discussed in a second article along with "acid skin," "alkalizing cosmetics," "alkalizing footwear," and other such products of the advertising agent's fancy.

Alkalize With Milk?

THE advertising of the New York State Bureau of Milk Publicity has been urging that more milk be drunk because milk "alkalizes." Milk is an excellent food. It furnishes calories, good proteins, vitamins, calcium and phosphorus. But it is because it is rich in these essentials that milk is an excellent food, not because it contains a small residue of alkaline minerals. If a person never drank milk at all he would still be in no danger of acidosis and the campaign to get people to drink more milk should not, certainly, be based upon misleading slogans that perpetuate the public's confusion. There is irony in the fact that the Director of Health Service of the Borden Co., Dr. James A. Tobey, in a recent article in the *American Journal of Public Health*, protested against just such misleading statements as the Bureau has been guilty of using. He says: "It is the duty of public health officials . . . to aid in debunking fads and follies, such as the belief that acidosis results from acid food, and that foods of different chemical composition can upset the acid base balance of any normal person." Further: "The effects of foods . . . in bringing about modifications in the chemical content of the blood is practically nil."

The DOCKET

Notes on government actions against misleading advertising, false claims, dangerous products

THE notes that follow are taken from Federal Trade Commission releases on its stipulations with advertisers.

The Notices of Judgment under the Food & Drugs Act refer to individual shipments of the products involved.

We urge CU members to send into the FTC advertisements that appear to violate law or honesty. Ask that the FTC give its opinion of them; and ask what it intends to do about them.

The Federal Trade Commission has taken action against:

Formula 281, a reducing compound distributed by Harry Gorov, trading as Isabella Laboratories, and sold by the Hartman chain drugstores in Chicago. The action taken in this case is peculiarly significant because upon application of the Commission, the U. S. District Court issued an order temporarily restraining the dissemination of false advertisements concerning *Formula 281*—the first action of its kind taken under the new Wheeler-Lea Act.

The issuance of such court orders may have a very salutary effect on unscrupulous advertisers who in the past have often disregarded the Commission's cease and desist orders. Let us hope that the Commission will show its willingness to direct this weapon against nationally advertised products as well as obscure remedies.

Formula 281, advertised as a safe weight reducer, contains dinitrocresol—a drug closely related to dinitrophenol. Reducing preparations containing dinitrophenol have been responsible for many cases of eye cataracts, total blindness and even death.

Furnaces (Montgomery Ward & Co.). The company has agreed to cease representing that the gas floor furnaces it sells possess certain exclusive features when in fact such features are incorporated in compet-

ing products. It will also discontinue advertising that its furnaces will produce perfect combustion and not permit the leakage of gas.

Radios (Sears, Roebuck & Co.). The company will cease advertising radio receiving sets with the words "All Wave" or "All-Wave Reception," when they refer to sets incapable of reception over the entire meter range covering all broadcast transmissions.

Vitamin E Capsules (Sears, Roebuck & Co.). The company agrees to stop advertising that an adequate amount of vitamin E is not obtained from the average diets in this country.

The Food & Drug Administration has seized shipments of:

Butter. More than 90 tons of butter were seized in Chicago for containing mineral oil. Partial substitution of mineral oil, which is devoid of any food value, for butterfat constitutes a serious cheat.

Butter makers, large and small, frequently find themselves in trouble with the Food & Drug Administration for other reasons. Armour & Co. has been a persistent offender. One shipment of its *Goldendale Creamery Butter* was seized because samples were found to contain "mold, insect legs, filth, and nondescript dirt." Another shipment of Armour's butter was seized because it was deficient in milk fat; a third because it was short weight; still a fourth because it was labeled "made in U.S.A.," while actually it had been made in Siberia.

McKesson's Milk of Magnesia Toothpaste (McKesson & Robbins, Inc.). A circular accompanying the product bore the statement, "Bleeding gums, the forerunner of the dreaded pyorrhea, known as Gingivitis and Vincent's Disease, commonly known as Trench Mouth, are distinctly benefited by its use." These statements regarding the curative or therapeutic effects of the articles were false and fraudulent.

TO ALL MEMBERS OF CU: *The growing offensive of business and the press against CU, and the consequent ban on CU advertising, has forced us to turn more and more to our members to assure the organization's continued expansion. This contest is a new and important move in that direction. CU knows that it does not need to use rewards to hold the loyalty of its members. The work of 700 group leaders who have brought in thousands of members without any compensation provides ample evidence of this. But in the face of the present threat to CU's growth we feel that such recognition of our members' loyalty as this contest enables us to give, will coordinate their efforts and help us to build up a stronger counter-offensive. CU looks to its members to make this campaign successful.*

Arthur Kallix

ANNOUNCING

CU's "Best Buy" Membership Contest

WHAT IS THIS CONTEST—AND WHY?

CU's remarkable growth in the two and a half years since it was established—from no members at all to more than 60,000—has been largely due to the support and plain hard work of the members themselves.

They have spread the word of what CU is doing; they have campaigned for CU among their friends, and their friends have joined and spread the word further.

Now—with newspapers and magazines suppressing CU's advertising—CU's reliance is more than ever on its membership.

Thus this contest. It is a straightforward means to help build CU into a stronger organization through the concerted action of CU's members. And it is a means of rewarding CU's members for the work they have contributed and will contribute—work without which CU could not grow.

The contest is unique, CU feels, in two important respects:

1. Its success will serve to profit no person or closed group, but rather to advance the interest of consumers everywhere.
2. It is entirely free of tricks, vague conditions, concealed promotion schemes and the like.

WHAT DOES CU EXPECT TO GAIN?

CU's membership constitutes CU's only source of income. And CU's income determines how much work it can do for consumers.

At the present level of membership much vitally important work must be left undone for lack of funds. From the contest CU hopes to gain several thousand new members, whose fees will be put to work immediately. Projects long planned, for widening the scope of CU's activities and extending the organization's usefulness, can thus be financed.

At the same time the threat of the business offensive against CU will be greatly lessened. For CU's strength to resist this offensive lies in its power to grow.

The gain to CU members—prize winners and non-prize winners alike—will be measured in terms of more testing, wider brand coverage, improved services generally.

WHAT DO THE PRIZES COST CU?

THE prizes cost CU a great deal—but not as prizes. They are for the most part test samples, bought for the tests upon which CU's technical staff bases its ratings.

The products offered as prizes are selected from those uninjured in the testing work, and only "Best Buys" or products high on the "Also Acceptable" list are being offered. Ordinarily CU would attempt to sell them. By using them in this way, CU is able to make a routine expenditure do double duty, and at the same time give CU members a tangible return of merchandise which their fees helped to buy.

In the case of the products offered as Special Prizes, CU will extend its purchase of test samples to include as many as appear to be needed for the prize winners.

We are enabled to do this because the income from the contest memberships required to win these prizes makes their purchase economically feasible.

HOW SHOULD MEMBERSHIPS BE SOLD?

It should be kept in mind that CU is a non-profit membership organization set up to serve the needs of its members as consumers.

As you know from your own experience, CU members can profit personally and directly by belonging to CU, by reading the *Reports* and the *Buying Guide*, by using the information they contain. And this fact should underwrite all your selling efforts.

Many members bring in new members simply by getting friends and relatives to read through a few copies of the *Reports*. For a CU membership in most cases will all but sell itself—once its meaning is made clear.

Your job is simply to make it clear—to as many people as possible.

NOW

Read the Contest Rules carefully.

Fill out and send in your entry blank.

Remember that *only three* memberships will bring you a prize.

Remember that *every* membership you bring in helps to strengthen CU—your organization.

Memberships as Gifts

A MEMBERSHIP in Consumers Union makes an excellent Christmas gift. In this new contest, all memberships entered as gifts will be fully credited, including those entered at the special Christmas Gift Rate of \$2.50 each (for three or more entered at once).

You should enter not only the membership gifts that you yourself may purchase; urge your friends and relatives to take out memberships as gifts for their friends and relatives. All such memberships purchased from you will be credited to your score.

★ PRIZES ★

(For an explanation of how Contest Points are computed, and for other details of the contest, see "Contest Rules" in next column)

Main Prizes

To the CU Member getting the most Contest Points, the following prize will be awarded (approximate retail value, \$800):

1939 PLYMOUTH



OR CHEVROLET

To the second, third and fourth highest scorers—their choice of the following prizes (approximate retail value, \$150 to \$175):

MECHANICAL REFRIGERATOR

RADIO-PHONOGRAPH COMBINATION

CAMERA—SPEED GRAPHIC OR GRAFLEX

Special Prizes

For all other contestants getting 18 or more points

300 or more Contest Points—choice of any one of the following prizes (approximate retail value, \$85 to \$100):

ELECTRIC RANGE RADIO-PHONOGRAPH WASHING MACHINE

175 or more, but less than 300, Contest Points—choice of any one of the following prizes (approximate retail value, \$40 to \$55):

PORTABLE TYPEWRITER AUTO RADIO VACUUM CLEANER
CONSOLE RADIO EASTMAN CAMERA

72 or more, but less than 175, Contest Points—choice of any one of the following prizes (approximate retail value, \$12 to \$15):

ELECTRIC SHAVER MINIATURE RADIO AUTOMOBILE HEATER
AUTOMATIC ELECTRIC TOASTER EASTMAN CAMERA
FOOD MIXER PHOTOELECTRIC EXPOSURE METER

36 or more, but less than 72, Contest Points—choice of any one of the following prizes (approximate retail value, \$6 to \$10):

ELECTRIC IRON ELECTRIC HEATING PAD ELECTRIC CLOCK
WAFFLE IRON EASTMAN CAMERA

18 or more, but less than 36, Contest Points—choice of any one of the following prizes (approximate retail value, \$3 to \$5):

FOUNTAIN PEN EASTMAN CAMERA ELECTRIC CLOCK
ELECTRIC TOASTER (NON-AUTOMATIC)

Premium Prizes

To every CU member getting 9 or more Contest Points—his choice of any one of the following premiums (approximate retail value, 60¢ to \$1.40):

CU REPORTS BINDER OR A CU BOOK

{ "False Security," by Bernard Reis; "Our Common Ailment," by Dr. Harold Aaron (see page 28); "Millions on Wheels," by D. H. Palmer and Laurence Crooks (see page 8) }

Contest Rules

1. Any person who is now a member of Consumers Union (except staff employees or officers and their families), or who becomes a member before January 31, 1939, is eligible to take part in the "Best Buy" Membership Contest. Contestants must fill out the Contest Entry Blank (see below).

2. Special Contest Membership Blanks will be mailed to each contestant on receipt of his Entry Blank. These blanks have been designed for the convenience of contestants and CU's Contest Staff, and their use is recommended; but memberships submitted in any form will be counted, provided they bear the contestant's name and are clearly marked "Contest."

3. CU members entering the Contest may receive help from their family or friends in the sale of memberships. But Contest Points (see Rule 5) will be credited only to actual CU members, as recorded in our files.

4. All memberships sold by contestants must be either mailed or delivered to our office (55 Vandam Street, New York) not earlier than Monday, October 17, 1938, nor later than midnight, Tuesday, January 31, 1939 (the postmark of mailed entries will determine their date). Each entry must be accompanied by the full amount of money due. Consumers Union cannot assume responsibility for loss of cash in the mail, nor for Contest Points (see Rule 5) forfeited through such loss. Money should be sent by Postal Money Order, check or registered mail.

5. Winners will be determined by a simple point system. Three points will be awarded for any new full membership or renewal of an existing full membership including that of the contestant. (A full membership includes all regular \$3 memberships; Library subscriptions at \$2.50; Foreign and Canadian at \$3.50; Christmas Gift Memberships in groups of three or more entered at the Special \$2.50 rate; and subscriptions to the Western Edition at \$3.50). One point will be awarded for each Limited membership or renewal at \$1 (Canadian and Foreign, \$1.50; Western Edition, \$1.75). Memberships sold through subscription agencies will not be counted in this Contest.

6. Results of the Contest and names of prize winners will be published as soon as possible in the Reports. All prizes will be delivered anywhere in the United States or Canada by prepaid shipment.

7. In the event of a tie for any of the Main Prizes, like prizes will be awarded.

8. The decisions of the judges (CU's Board of Directors) shall be final.

9. Memberships at the Group rates do not count in this contest. CU is, however, conducting a similar contest for the 700 organizers and leaders of Consumers Union membership groups. Individuals who wish to compete in the group contest may obtain complete information from CU's Organization and Education Department.

CONTEST Entry BLANK

TO CONSUMERS UNION,
55 VANDAM ST., NYC

I accept the terms of this contest as contained in the Contest Rules.

NAME

ADDRESS

(Immediately on receipt of this blank, properly filled in, CU will send you a special coupon book in which to enter memberships collected for the Contest.)

Tires & Tire Wear

With ratings of 15 leading brands

BELIEVE it or not: if a tire dealer stocks only one model of each size and type produced by a manufacturer offering five price lines, as many do, he will have to carry no less than 350 tires—for passenger cars only. But that's a problem for the dealer.

The problem confronting the consumer is simpler, since at least he is normally interested in only one size. But he's nonetheless well justified if he finds it difficult to select a tire intelligently.

There is first the matter of choosing between brands, each one allegedly superior to any other on the market. Then he has to decide whether he should have a 4-ply or a 6-ply tire. And finally he has to determine whether a first-line tire at \$13, a second line at \$11.70, a third at \$9.75, a fourth at \$8.35 or a fifth at \$8.06 will give him

the most value for his money. Some manufacturers make more than one first-line tire; that's something else for the would-be buyer to ponder.

Or maybe he decides to investigate mail-order tires. He will find, for example, that Sears-Roebuck's first-line tires sell for approximately 10% less than the first lines of the major companies, its second line for about 30% less, its third line for around 40% less.¹

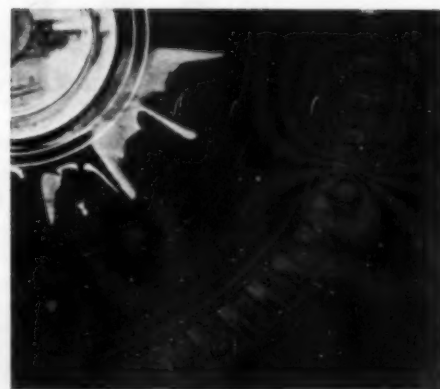
In the absence of generally accepted standards or comparable guarantees, the average consumer simply has no way of estimating relative tire wear. This report is designed to clarify the situation insofar as the specific brands and models covered are concerned. Numerous samples of each have been run thousands of miles, and accurate mileage data have been tabulated on the basis of actual wear.

Speed and Temperature

A STUDY made by the B. F. Goodrich Co. shows that at a temperature of 60° F. tire wear increases some 13% as car speed is increased from 20 to 30 miles per hour. From 30 to 40 m.p.h. the increase is nearly 25%. And above 40 m.p.h. the rate of wear jumps up even more rapidly until at 50 m.p.h. it is almost double that at 20. In other words, a tire that would give 15,000 miles of service on a car driven at an average speed of 30, will last less than 9,000 miles at 50.

An automobile owner can't do much about the weather, but the effect of warm or hot temperatures on tire wear is startling. According to the Goodrich tests, at 80° F. a tire will wear out more than three times as rapidly as at 40° F. This accounts for the tremendous differences in tire wear between Summer and Winter, also for the poor mileage obtained by car owners in the South. Tread design has some effect on

¹ These are prices in the Sears' stores. Catalog prices are lower but delivery charges must be added.



the rate at which a tire will dissipate heat, but as yet the differences among the popular brands of passenger car tires in this respect are not significant.

Tires should preferably be purchased in the Fall, as the non-skid properties of the new tread are most important for Winter driving.

Alignment and Pressure

IMPROPER front wheel alignment—loose shackles and bearings, too much or too little toe-in, &c.—is more important in the wear of front wheel tires than any other factor. A tire on a loose wheel or one that is out of line will soon show uneven wear of the tread on the outer or inner edge or develop a bumpy surface. Even new cars are not free from defective front wheel alignment—original specifications vary widely and the independent front wheel suspensions are contributing to the trouble.

One tire manufacturer has threatened to start an independent study of his own and tell the automobile manufacturers how to design the front end of their cars. Another tire company gave up testing tires on front wheels because the cost of keeping the wheels aligned was too great.

The simplest factor affecting wear, and the easiest to control, is the air pressure in your tires. A test made by the Goodyear Co. showed that tires inflated at the recommended pressure of 28 pounds wore only 75% as fast as those inflated to 22 pounds. Too little air pressure increases deflection and sidewall flexure, reduces carcass life, causes overheating and extensive scuffing of the tread.

Underinflated tires are also subject to rim bruises which occur when the

Millions on Wheels

UNDER this title a new book on automobiles written in collaboration by CU's Technical Supervisor Dewey H. Palmer and Laurence Crooks, member of the Society of Automotive Engineers, is to be published by Vanguard Press, October 30. In addition to data on new and used cars, their selection, care and proper operation, the book will present information on tires, gasoline, oil, automobile radios, heaters and other supplies and accessories. A unique feature will be a supplement giving ratings, by brand name, of automobiles and automobile accessories and supplies.

For CU members, a special edition will be available at \$1.25.

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tire strikes a curb or stone in such a manner as to flatten out the casing, crushing the sidewall between the rim flange and the curb.

If overinflated, the tire will ride on the crown, thus causing rapid wear at the center, together with overstressing of the tire fabric.

Tread Design

Despite advertising to-do about the non-skid properties of various tread designs, the differences are hardly significant. Any advantages of a particular design at the present time are largely offset by its disadvantages. In general, traction, or the resistance to skidding straight ahead, is increased by crosswise grooves, while side-skidding is reduced by grooves running around the tire.

Cross grooves, however, wear unevenly and rapidly—the front or leading edge of each tread ridge wears down quickly, while the back edge tends to fold under pressure and wears very little. Most tire treads, therefore, represent a compromise, with grooves running around the center of the tire to resist sideslipping and the edge of the tread grooved crosswise or at an angle to give traction and braking force.

The General Tire and Rubber Co. in 1935 brought out one of the first tires to have a large number of thin ribs running around the tread. This new "multi-vane" tread, it was claimed, possessed high non-skid properties, because under pressure and brake application the thin vanes of rubber deformed to produce a "squeegee" effect on the pavement.

Other companies followed with somewhat similar "non-skid" tires—U. S. Rubber with a model on which the ribs were cut at right angles into hundreds of sharp-edged blocks; Fisk with a tire on which the cross channels were filled with a resilient white rubber claimed to give a gripping action; Goodrich with a model bearing a series of wave-like spirals running around the tire.

The claims for these new premium tires are based chiefly on the assumption that cutting the tire tread into numerous ribs or vanes will prevent skidding on wet pavements by squeezing out the film of water between the rubber surface and the road. Some

Correction—Fur

IT was erroneously stated in the August *Reports* that "American broad-tail is the . . . pressed fur of a domestic lamb." The pattern is usually natural and not pressed in, and the fur does not come from the U. S. but from Argentina.

such action probably does take place, but it is doubtful that it is greatly different from that of tires with conventional treads.

The safety claims for these new tires were, in fact, discounted by J. E. Hale, Manager of the Development Dep't of the Firestone Tire & Rubber Co. In an article in the *S.A.E. Journal* for March, 1938, he remarked that the all-rib-type tires were developed "to produce quiet running and longer mileage with a slight loss of traction and non-skid." For those tires with grooving carried to an extreme, tread wear is probably higher than for regular-line tires.

Mud and snow tires with heavy traction bars or knobs offer definite advantages over tire chains in deep snow or on muddy roads. They should not be run for any length of time on pavement as the bars or knobs wear unevenly and quickly.

Retreaded Tires

PRICE-CONSCIOUSNESS on the part of buyers has greatly increased the use of retreaded tires in recent years. They now make up about 5% of the replacement tires sold for passenger cars and approximately 20% of those sold for trucks. In 1938, according to one estimate, 4,500,000 tires will be retreaded.

There are four retreading systems:

1. *Complete retread*: The only method that can be used with tires which are worn through the breaker strip or are badly cut or snagged. It is the most satisfactory system and, when done properly, may be expected to deliver 70% to 80% of the mileage obtained from the original tread.

2. *Semi-capping*: The worn tire is buffed all over the complete tread and shoulders. Material is removed from the center of the tread down through the breakers or tread plies and replaced with new tread stock.

3. *Recapping*: The tire is buffed over the complete surface of the tread and

shoulders to remove the non-skid design, but rubber is not removed down to the breaker strip.

4. *Tread capping*: The tread is simply buffed smooth between the shoulders to prepare a region to receive the new tread stock. This is the least satisfactory of the four systems.

Although the latter three methods are less expensive and are satisfactory for light service or easy operating conditions, none will stand up as well as the complete retreading job.

Retreading may be done as many as two or three times on good tires which have not been injured, and may save as much as half the cost of new tires, if properly done. Ask the dealer for the technical specifications of his retreading compound. If he can't give them to you, the odds are he isn't using a suitable formula or doesn't know the requirements of good vulcanizing technique.

Only first-line tires should be retreaded. And do not place retreaded tires on front wheels unless you know that they have been carefully balanced by the retreader. Retreads should not be expected to stand up under the extreme high-speed duty that new tires can take.

Mail-Order Tires

THE data on which the ratings are based did not include mileages for mail-order tires. CU has made some preliminary tests of these tires but because of the limited number of samples included it is impossible to make conclusive recommendations at this time.

The preliminary tests indicate that on a miles-per-dollar basis Sears' second line (*Hercules*) and Ward's first line (*Riverside*) are good buys. Sears' first line (*Companion*) and Goodyear *All Weather* (included in the test for comparative purposes), appear definitely to cost more per mile than the other two.

Ratings

RATINGS below are based on records of actual mileage reports by a government agency on 6-ply, "first-line" tires. (Note the changes in ratings over previous reports, which this one supersedes.) The relative ranking of 4-ply tires of the same make and

grade should not be substantially different from the ratings for 6-ply tires. Because of their greater resilience, 4-ply tires are preferable for ordinary passenger car service.

List prices of the tires reported on are about \$18 for the 6x16, 6-ply tire. An approximate net price of \$13 is used in calculating the cost per 100 miles. Tire prices will often vary from brand to brand; and where this happens the cost ratings below should be adjusted proportionately. In some cases low-ranking tires may then become "Best Buys."

Best Buy

Goodrich (B. F. Goodrich Co., Akron). 3.9¢ per 100 miles.

Also Acceptable

Century (Mansfield Tire & Rubber Co., Mansfield, Ohio). 4.3¢ per 100 miles.

General (General Tire & Rubber Co., Akron). 4.4¢ per 100 miles.

U. S. Royal (U. S. Rubber Products Co., NYC). 4.5¢ per 100 miles.

Lee (Lee Rubber & Tire Corp., Conshohocken, Pa.). 4.6¢ per 100 miles.

Goodyear All Weather (Goodyear Tire & Rubber Co., Akron). 4.9¢ per 100 miles.

Dayton (Dayton Rubber Mfg. Co., Dayton, Ohio). 4.9¢ per 100 miles.

Diamond (B. F. Goodrich Co.). 5.3¢ per 100 miles.

McClaren (Dayton Rubber Mfg. Co.). 5.4¢ per 100 miles.

Kelly-Springfield (Kelly-Springfield Tire Co., Cumberland, Md.). 5.4¢ per 100 miles.

Firestone (Firestone Tire & Rubber Co., Akron). 5.5¢ per 100 miles.

Limited data on the following tires indicate relatively short life. Unless available at lower prices than those brands listed above, they are not economical purchases.

Miller (Miller Rubber Co.). 6.5¢ per 100 miles.

Fisk (Fisk Rubber Corp.). 6.8¢ per 100 miles.

Mohawk (Mohawk Rubber Co.). 6.8¢ per 100 miles.

Dunlop (Dunlop Tire & Rubber Corp.). 9.5¢ per 100 miles.

Labor in the Tire Industry

MORE so than in most other industries, a desire for profits and an overweening drive for markets have led the tire companies to overexpand plant capacity. Since 1915 there have been more than 500 tire companies; the field narrowed down to about 30 by 1935 and the output per plant has increased from less than 100,000 tires annually to well over 1,000,000. Meantime, technological developments have revolutionized methods of production.

Overwhelmed by technological unemployment on the one hand, and the chaotic conditions of one of the most brutally competitive industrial setups in America on the other, tire workers foundered helplessly for years. The speed-up was developed by the rubber barons into a fine art that took its toll of workers steadily. Labor spies saw to it that workers who complained got no opportunity to do more than that.

And so things went until 1936. In that year the United Rubber Workers of America (CIO) was established, and tire labor got itself a powerful voice to raise in defense of its rights. At once the young union locked horns (over the question of layoff notification, along with other issues) with Goodyear, the mightiest tire company of them all.

Goodyear fought the union's demands through five bitter weeks of picketing in zero weather, but in the end settled. The Goodyear workers won—and still retain—the six-hour day, increased wages, cancellation of proposed layoffs, union recognition and modification of the inhuman speed-up.

And there have been extensive other gains since then. By the time of the union's second convention last Fall, 75,000 rubber workers were enrolled.

Vacations with pay had been won for 95% of the union membership. Average wages were 33 $\frac{1}{3}$ % ahead of 1934, with even higher increases in the lower brackets. The six-hour day had become a standard where the 60- and 72-hour week had prevailed. Seniority rules and protection against unjust layoffs, discharges and speed-

ups had been obtained through hard and often bitter struggles.

THE current depression, however, impelled the companies to attempt to upset these gains.¹ Goodrich took the lead by serving an ultimatum giving the union the "alternative" of accepting a wage cut of 17 $\frac{1}{2}$ % and abandonment of the six-hour day or of having the company move 5,000 jobs out of Akron.

This move had, in the words of Mr. Robert Cruden, publicity director of the union, "the effect of a bombshell on a city already jittery from fears of decentralization—[which] was just what the company publicity men counted on. Hysteria swept over the city. Newspapers, businessmen, civic groups and phoney evangelists joined hands to force the workers to take a cut." Credit agencies used coercion, threatening workers with immediate repossession of credit-bought furniture, cars, &c.

Taking the offensive, the union rallied its members and the public, explained that a wage cut would not improve the competitive condition of the company. The union also pointed out that a cut in the Goodrich plant would mean a cut in every Akron shop, which would slash purchasing power an estimated \$10,000,000 annually. Finally, after violation of seniority rules by the company, the workers struck and declared a "labor holiday."

In six days the company announced that it was prepared to sign an agreement. Firestone, which had waited to see what would happen, also came around and signed. Then the Goodyear plant went on strike and Gover-

¹ As a writer in one of the volumes prepared by members of the President's Committee on Price Policy states: "... the demand for tires ... is an aspect of the demand for transport by automobile ... apart from the car, the tire has no utility and no function to perform." Hence, any survey of tire labor conditions must reckon with an industry dependent for its livelihood on another industry. In such a period of depression as the present, declining car sales mean less tire production—and economic disaster for tire workers who have no reserves to fall back on. In the first six months of 1938, tire shipments declined 41% under the same period in 1937.

nor Davey (since defeated in the primaries) mobilized 3,600 National Guardsmen.

Many workers had previously been injured by Akron police; this time the union leadership prevented a battle with the troops. Upshot of the strike was a bargain with the company, settling outstanding grievances and securing a pledge to conclude a written agreement which has not yet been fulfilled.

Meantime, the union is continuing its fight against the threat of decentralization (an old one), by removing the danger of low wage possibilities in outside territory. A consistent drive has created 16 new locals since the 1937 convention, and the officers believe that before very long even the open-shop fortresses of the South will fall.

Notes on labor relations with the several companies follow:

Dayton—Situation about the same as with *Mansfield* (see below).

Dunlop—The union reports that wages are low, hours long and working conditions bad.

Firestone—Conditions and wages good. Company is operating under sole and exclusive bargaining contract with URWA local.

Fisk—Wages and conditions good. Company is operating under sole and exclusive bargaining contract with URWA local. The company informs us that it had an average of 1,442 employees during 1938 and that the average number of weeks of work per year totalled 48. Average weekly wage, according to the company, is \$28.10. CU does not know whether or not this average includes the salaries of executives and office workers.

General—The union reports that conditions are the same in this company's plant as at *Fisk*.

Goodrich—This company has a signed agreement with the URWA. The union reports conditions satisfactory and wages good.

Goodyear—This company averaged some 10,000 employees during 1938. Wages are good but the workers have no contract as yet; the company and union have been negotiating for some time. The attitude of the company toward collective bargaining is hostile. At plants in Gadsden, Ala., and Jackson, Mich., employees who are members of the union have been beaten

upon company property with the open connivance of company officials, as proved by testimony given before the LaFollette Committee. This company manufactures the same brands in all three of its plants.

Kelly-Springfield—Owned and controlled by *Goodyear* and has the same labor policy.

Lee—Unorganized. The union reports that hourly wages are low.

Mansfield—Bitterly anti-union, the company has reportedly been working its employees as high as 12 hours a day. With the assistance of certain local officials and police, the union reports, union organizers have been arrested at various times and threat-

ened openly with physical violence.

Miller—A division of B. F. Goodrich Co. All tires are manufactured by *Goodrich*.

Mohawk—This company reports an average of 220 employees in 1938. Average number of weeks of work per year is 40. Overtime is paid for more than eight hours per day or 36 hours per week. Guaranteed hourly wage is 75¢ for male and 45¢ for female workers. The company is operating under contract with the union.

U. S.—Wages and conditions are very good, and the union reports that the labor policy of the company is progressive. Company under contract with the URWA local.



That Extra Ingredient

A CU member living in New York City recently found himself confronted with this puzzle: If, for a certain brand of bread, the "best" wheat flour, the "best" fine salt and only "pure" filtered water are used, what would be the appropriate adjective to apply to the bug found nestling in a loaf? Should it likewise be "best" or would "high-class" be more suitable?

After some deliberation our member, who does not pretend to be an expert in these matters, passed the buck to the maker of the bread, which happened to be the famous *Bond* brand. "I am sure," he wrote to the General Baking Co., "that your greater familiarity with these docile animals will permit you to choose an apt description."

With solicitude he pointed out that the guaranty printed on the wrapper

of each loaf of *Bond* bread might let the company in for some trouble since it states that certain "pure food materials and no other ingredients" are used. To avoid this misfortune, he suggested, the company might add to the ingredients listed "and occasional cockroaches (*Periplaneta americana*)."¹

Our member's invitation to the company to send a representative to view the remains brought a request for an interview and a question as to what, in his opinion, the company should do. The answer to that one is easy. The thing to do would be to keep bugs out of the bread dough.

¹ But our member erred. While the bug somewhat resembled the common cockroach, CU's consulting entomotomists are of the opinion that it was a flour beetle, possibly *Tribolium confusum* of the well-known family Tenebrionidae.

The Great American Cure-All

... as such has Fleischmann's yeast been represented in its advertising. The Federal Trade Commission, which doesn't agree, may change the picture.

To young and old alike, to sufferers from complaints ranging all the way from skin disturbances to constipation and "fallen stomach," to boys envious of the muscular development of athletes, and to tired businessmen seeking the secret of beginning life at 40, *Fleischmann's* yeast has been held up as the Great American Cure-All. Young and old alike, many of them have believed the promises made and faithfully eaten three cakes of yeast daily.

Now the Federal Trade Commission has stepped in rudely to suggest that all has not been as represented. The claims made for the little tinfoil wrapped cakes, says the FTC, have strayed far from the facts. So *Fleischmann* a few weeks ago was on the receiving end of one of the Commission's "cease and desist" orders. In a long list of advertising practices and claims found objectionable by the Commission, most of *Fleischmann's* best-known themes and slogans stand indicted: "False and misleading."

Consumers will soon learn what effect, if any, the Federal Trade Commission's order will have. It *may* mean a change. But *Fleischmann* is a tough customer. Its advertising onslaught has successfully bamboozled the public for almost 20 years.

Before that onslaught began, *Fleischmann's* had been familiar to and widely used by the housewives of the nation not for their complexions, not for constipation, but for making bread and rolls. That market gradually folded up as the transition from homemade to bakers' goods took place.

The *Fleischmann* Co. could and did sell its yeast to the rapidly expanding baking industry—it built, in fact, a virtual monopoly in this field—but at the same time it didn't want to lose its household trade. To keep it, a new appeal had to be found. And out of this necessity the yeast-for-health idea was born.

Thus motivated, Standard Brands (*Fleischmann's* present parent concern) has been lavish with advertising appropriations to convince people that yeast is a tonic, food and cosmetic all rolled into one. A million dollars has gone in one year to persuade the country's adolescents that three cakes of yeast a day would keep pimples away and make each and every one of them the belle or beau of the ball.

The personable Rudy Vallee, whose job for seven years has been to create a sympathetic atmosphere for the *Fleischmann* radio plug, has reportedly drawn an annual salary of \$166,000—more than that of the director of Standard Brands. Costly ads, pointing the way to "new energy and the happy, busy kind of life everyone wants to lead," are run in practically all of the popular magazines and many of the newspapers.

The advertising has been cut according to the pattern used so well in booming the sales of patent medicines. Testimonials, pictures of "distinguished" physicians (invariably associated with European, not American, hospitals), scare copy, and vitamin appeal have been laid on thick and heavy.

The resulting mixture is made up of about equal parts of hokum and falsehood. For yeast won't clear up adolescent pimples, as physicians know, and, according to at least one authority, it may actually cause acne in some people. It is not a constipation cure. And its vitamin claims are wild exaggerations.

EMPHASIS has been placed in the *Fleischmann* ads, for example, on the supposed relationship between vitamin A and colds. Not only has vitamin A not been shown to be a specific for colds and other infections of the respiratory tract, but there is no evidence that an excess of the vitamin over normal body require-

ments helps in preventing any sort of infection. The ordinary diet keeps the average individual well supplied with vitamin A. And if a doctor *should* find that a supplement is needed, he would be inclined to prescribe cod liver oil, rather than *Fleischmann's* yeast.

Vitamin B, according to the *Fleischmann* ads, is good for "sagging stomach," poor digestion and "sluggish intestines." According to the doctors, if you are living on a normal diet the vitamin B will take care of itself. It is unfortunately true that vitamin B deficiency does exist among thousands of undernourished people, particularly in the South. But it is nothing short of criminal to convince these people to spend what amounts to a large portion of their food budget on *Fleischmann's* yeast; the same amount, well spent, might be the deciding factor toward the establishment of an adequate diet.

Doctors do, in instances of gross vitamin B deficiency, prescribe yeast. But they have their patients take the much more potent, less expensive, and far less ballyhooed brewer's yeast.

Fleischmann ads refer also to the work which has been done with respect to the role of vitamin D in the formation and maintenance of normal tooth structure. This is not, in itself, objectionable. But the implication is strong that vitamin D as provided by *Fleischmann's* yeast will insure normal tooth structure, and will prevent decay. Real scientists (not the white-coated ones in the ads) have as yet found no way to do either of these things. Even if you do need supplementary vitamin D (which is doubtful) other forms, such as viosterol or cod liver oil, offer a much better source of it than yeast.

Fleischmann's vitamin G is now called the "vitality" vitamin. It used to be called the "growth" vitamin. *Fleischmann* ads showed pictures of thin, round-shouldered, hollow-chested children, with the caption "Too little vitamin G." Next would come a child, a head taller, well nourished and well built: "Diet ample in vitamin G." Then a concluding word in the text of the ad that yeast is rich in vitamin G, that the child from five to 12 years of age should be given one or two cakes daily. No inkling that round shoulders and hollow chest might be

You Can't Count On Meals Alone For Vitamins

Not Enough Vitamin D

B Yet a Shortage of Even ONE Vitamin in Your Diet Can Lead to Health Problems. By Eating a CONCEALED Supply of These 4 Vitamins You Don't Need to Worry About Enough of Them at Meals.

The Rich Food Source of these combined Vitamins A, B, D and G



FLEISCHMANN ADVERTISING— 1936

from malnutrition or tuberculosis or dozens of other diseases; or that, in the light of these numerous possibilities, a poorly developed child should have advice from a physician rather than from the special pleaders of the Fleischmann Yeast Co.

Crude and misleading though the Fleischmann advertising has been, it has succeeded well in getting across the triple-threat idea that vitamins are necessary to health, that yeast contains vitamins, and that, therefore, yeast is necessary to health. More than 70% of adult and adolescent America has eaten yeast at one time or another during the last 18 years, according to one estimate. The young eat it for pimples and the middle-aged eat it for vitality and together they managed to knock Fleischmann's sales up to almost \$10,000,000 in 1937.

Figure it out for yourself: One person eating three cakes a day contributes over \$30 to the coffers of Standard Brands in one year—\$30, incidentally, that might much better have gone for meat, eggs, fruits and vegetables.

UP to now Fleischmann's advertising has faced no setbacks. It was not subject to the supervision of the Food & Drug Administration, which can keep an eye only on labels. The American Medical Association did re-

FLEISCHMANN ADVERTISING— 1937

fuse to include the yeast among its list of accepted foods and issued a long statement pointing out the absurdity of the claims made for it. But the disapproval of the A.M.A. probably didn't bother Fleischmann's. *Good Housekeeping* showed no similar squeamishness and was quite willing to give the little cakes its Seal of Approval.

The Federal Trade Commission order specifies that Fleischmann's can no longer claim that its yeast will rid the taker of pimples, or can be relied upon to keep the skin clear, or will remedy or prevent a fallen stomach, or will cure or prevent constipation, bad breath, or other manifestations or irregular digestion, or will keep the whole intestinal canal healthy.

It will be instructive to see what happens as a result of this order. Obviously the huge and powerful Standard Brands would be grieved if the sales of one of its most profitable products were to suffer a decline. And obviously it isn't going to let that happen if it can help it.

Consumers should watch to see if the forbidden claims are actually dropped. And if they are dropped, consumers should watch to see whether other equally misleading ones are used to exploit the public until the Commission gets around again to objecting. The result of the Commission's order in this case may well serve as an index of how much protection the Wheeler-Lea Bill, under which the Commission operates, will actually provide against misleading advertising.

DIZZY DATES



Life Begins At 40

Jack Price is One of America's Best and Busiest News Photographers

Jack Price—Ace News Photographer
His latest book, "News Pictures," offers an expert's valuable instruction to the inexperienced cameraman.

He was OVER 40 when he started his Weekly Column, began his Lectures on News Pictures, wrote his Books

NEW PEOPLE have had longer, more practical experience in taking news pictures than Jack Price. For more than a quarter of a century he has been a news photographer, covering every kind of assignment under all sorts of conditions.

He worked on many newspapers, finally becoming the ace cameraman for the New York World. During the War, he was a photography instructor for the United States Army and took thousands of military pictures in France.

Price gained fame as a news photographer in 1922, when he induced the late John D. Rockefeller to pose for a group of newspaper pictures for the first time in his life.

Today, at 45—Price is recognized as one of the country's best news photographers—and one of its busiest. He operates his own picture agency, and since he was 40 has written two books, started a weekly column in *Editor and Publisher*, and given lectures on pictorial journalism in schools all over the country.

COMMON SENSE HEALTH WITH YEAST

"Without a good supply of energy to draw on, I'd never get through all the work I set for myself," he says. "People who keep their health should be able to do more after 40 than before, I think, because they have more experience to help them. I'm busy every minute, and I'm careful to keep in good shape physically so there won't be any falling of what I can do."

THESE TWO MEN, both past 40, are getting more out of life. Read their interesting letters.

Able to Work Faster

Dear Life Begins At 40:
I am a writer, doing newspaper and publicity work. A few years ago I suffered from frequent throbbing headaches. I'd lose my appetite, and my system had become sluggish. So when Fleischmann's Yeast was recommended to me I tried it. It did make my circulation, not right away, certainly—but about three weeks I found I was sleeping in the morning or lay after meals. And the headaches disappeared. I

45—Makes Better Profit in Business

Dear Life Begins At 40:
A few years ago I began to have indigestion and, as a result, I had to do in my business. I had a lot of trouble and was just when the new year came.

When a friend suggested Fleischmann's Yeast, I agreed to try it. After about a week, the yeast helped the nervous indigestion and two weeks later there was a marked improvement in my business.

Since then, I began to realize my business. I'm now making a much better profit in the business and out of my business.

Fleischmann's Yeast has done a great deal for me. I am always happy to be heard.

HERBERT REARD

Poor Health After 40 Often Comes from Slower Digestive Action

AROUND 40, the digestive juices tend to flow less freely. Then, the food you eat is not digested so well or so promptly as it should be.

Fleischmann's fresh Yeast helps to check this slowing up of digestion. Millions of tiny, live yeast plants in every cake of this fresh food have a tonic action that stimulates and increases the flow of these digestive juices from the stomach walls.

In addition to this benefit from the yeast itself, each cake also gives you 4 necessary vitamins—the vitamins you need to keep nervous system, the bones, the muscles and the vitality of the body that helps keep you young.

Get 3 cakes regularly every day. You'll soon like the fresh, healthy taste. It's hard to eat a cake if you don't eat each meal. This allows time for a strong flow of digestive juices to be ready to act promptly when you eat.

Remember, 40 is the best time to start.

FLEISCHMANN ADVERTISING— 1938

The Federal Trade Commission's order may mean a change. But Fleischmann's advertising onslaught has successfully bamboozled the public for almost twenty years. Consumers should watch to see if the forbidden claims are actually dropped.

Electric Food Mixers

Would-be buyers are urged to consider carefully before deciding that they need one. Herewith ratings of eight brands for those who are sure they do.

ADVERTISEMENT almost imply that an electric food mixer will do everything from feeding the baby to getting the Sunday supper. Families impressed by advertisements are advised to count at least 10 in this case before rushing out to the nearest store. The real question for them to answer is whether they will receive enough service from a mixer to justify its cost at all.

An intelligent decision must be based upon several considerations: whether you prepare most of your food at home or rely on the delicatessen and bakery; the size of your family; the type of cooking you do. The woman who makes angel food cake often will undoubtedly get more help from a mixer than one who seldom bakes anything more fancy than muffins—which probably can be mixed just as easily by hand.

Another consideration, often overlooked, is whether there is space on the worktable where the mixer may be kept set up, ready for action. If it must be taken down from a cupboard shelf, the beater attached and the cord plugged in each time it is used, chances are that as soon as the novelty has worn off you will be taking your mixer down from the shelf less and less frequently.

And don't overestimate the amount of work you will be saved by a mixer. CU found that none of the mixers tested can be left alone to perform such operations as mixing cake batter; constant attention is required to scrape the unmixed batter from the sides of the bowl to the center where the beaters can engage it.

For such reasons as these, CU cannot advise the purchase of an electric mixer for the small family or for one that does little heavy cooking and baking.

MIXERS consist essentially of a small electric motor with reducing gears through which it drives a set of detachable beaters. In the price range studied by CU all models had either three speeds or a continuously variable speed control.

To prevent the motor from slowing down under load, several mixers are provided with built-in centrifugal governors which keep the speed essentially constant by regulating the power input to the motor according to the load being carried. The supposed advantage of this construction is that the mixer cannot overspeed or slow down as liquid or dry ingredients are added to the batter. Also the speed may be varied continuously over the range of control. But CU found the governor-equipped mixers only slightly more convenient to operate, while on the other hand, they have the disadvantage of a more complicated mechanism.

Attachments—which range from meat grinders to silver polishers—were not included in the test; CU believes that selection of a mixer should be based upon the performance and durability of the mixer itself. Moreover, it is doubtful how much the average housewife will use most of the rather complicated gadgets after her first curiosity concerning their operation is satisfied. Buy only those which will be used frequently.

Meat grinders and other heavy-duty attachments can be used with some of the mixers only in connection with a special power unit consisting of an additional reducing gear and stand to which the motor must be attached. In the *Westinghouse*, *Sears* and *Gilbert* this unit is built into the mixer, a definitely desirable construction if much use is to be made of special attachments.

All mixers were checked for performance of ordinary routine kitchen tasks. These tests included whipping cream, mashing potatoes and mixing a stiff icebox cookie dough. In addition, a check was made of each machine's ability to mix in dry ingredients thoroughly and evenly by introducing lampblack into a bowl of batter under standard conditions. Differences in performance on these tests were relatively slight; extremes are noted in the ratings.

ALL mixers rated are listed by Underwriters Laboratories, Inc., which supposedly signifies compliance with minimum standards for safety. In CU's tests, all mixers met the high voltage breakdown standards of the Underwriters Laboratories. This organization, however, makes no requirement for current leakage—important if shock hazard is to be eliminated.

Several of the mixers—*Sunbeam*, *Westinghouse*, *Ward's Bettermix*, and *Sears' Powermaster*—were found to present a serious shock hazard from current leakage under ordinary use conditions. This may be due to poor design or materials, or, as in the first three mentioned, to the addition of



LAMPBLACK

... introduced into a test batter under controlled conditions was used to check mixing effectiveness

condensers connected from the electrical circuit to the motor frame to reduce radio interference. Apparently the manufacturers consider it more important that the housewife not be annoyed with static in the 11 A.M. Lonesome Loves program than that she be protected against the possibility of a bad shock.

Since mixers are used near the stove and kitchen sink, their shock hazard is of especial importance and CU does not recommend the use of any make unless the frame of the appliance is grounded to a water or steampipe. This can be done satisfactorily by fastening one end of a single rubber-covered insulated wire to one of the screws on the motor, tying the wire to the mixer cord at intervals and connecting the other end by a spring clip or radio ground clamp to the nearest water pipe.

CARE of the mixer should be essentially the same as for any other motor-operated device. Periodic lubrication according to the manufacturer's instructions and occasional replacement of the brushes should suffice. (Motor brushes on all makes except *Westinghouse* can be replaced easily without taking the machine apart.)



AFTER MIXING

... for a standard time, the batters were compared. Differences in performance were relatively slight

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The charges made by many manufacturers for replacement brushes are exorbitant; when new ones are needed, take the worn-out brushes with you and try an electrician's supply store rather than one selling appliances. Brushes can often be duplicated for 20¢ or 30¢ a pair instead of the 50¢ to 75¢ charged by the factory or its local dealer.

Acceptable

Hamilton Beach Model D (Hamilton Beach Co., Racine, Wis.). \$21. Continuously variable governor-type speed control (see introduction). Satisfactory performance on kitchen and endurance tests. All brushes can be replaced without taking the motor apart. Sample tested showed slight possibility of shock hazard. A "Best Buy" if provision is made for grounding the motor frame when in use.

Sunbeam Mixmaster Model 3A (Chicago Flexible Shaft Co., Chicago). \$21. Continuously variable governor-type speed control. Satisfactory performance on kitchen and endurance tests. Some vibration at higher speeds. Motor brushes accessible, but governor brushes cannot be changed without taking the motor apart, and a special wrench not supplied with the mixer is needed to remove the governor. Shock hazard excessive, especially when running at low speeds. Condenser to eliminate radio interference is connected to the frame, which should therefore be grounded when in use.

Universal Model E 891 (Landers, Frary & Clark, New Britain, Conn.). \$18.95. 3-speed switch. Small, low-powered motor which slows down considerably when mixing stiff batter. Power at medium and high speeds adequate for most operations. Performance satisfactory on endurance test. Inconvenient because motor must be turned upside down to attach juice extractor. Several other attachments available are attached to the base and operated by hand. Lowest shock hazard of those tested.

General Electric Model 159 DM 4 (General Electric Co., Bridgeport,

Conn.). \$21. Continuously variable governor-type speed control. Satisfactory performance on kitchen and endurance tests. Handle is not fastened rigidly to motor frame; some instability, particularly under heavy loads or when used as a portable mixer. One-piece beater assembly was defective as received. Make sure this unit can be attached securely. Mixer must be taken apart to replace governor brushes. Satisfactory on shock hazard; condenser to eliminate radio interference is not connected to the motor frame.

Westinghouse Cat. No.—FP-3 (Westinghouse Electric & Mfg. Co., Mansfield, Ohio). \$26.95. 3-speed switch. Has highest current consumption and most powerful motor of any mixer tested; due to type of speed control used, however, it does slow down somewhat under load. Considered satisfactory on kitchen tests. Some wear in drive shaft bearings on endurance test, with leakage of grease after 200 hours of operation. Outside metal case must be removed to change motor brushes. Has built-in power unit for heavy-duty attachments such as meat grinder. Shock hazard of sample tested somewhat high under certain conditions of operation. Condensers for eliminating radio interference are connected to motor frame; therefore it should be grounded when in operation.

CU did not include in its test the mixers made by Hobart Mfg. Co., Troy, Ohio, and sold under the name **Kitchen Aid**. Prices are \$49.50 for Model K and \$96.50 for the larger Model G. An extremely wide range of attachments is available for this brand. Information at hand indicates that where first cost is a minor consideration and the mixer will be in constant use for a large family, this brand may give more satisfactory performance and have greater durability than any of the regular domestic mixers listed above. Its price will not ordinarily be justified, however.

Not Acceptable

Sears' Powermaster Cat. No.—20-1585 (Sears-Roebuck, mail order only). \$13.95 plus postage, including juice extractor. 3-point speed

control. Has built-in power unit for various heavy-duty attachments. Performance slightly below average on kitchen tests. Ball bearing in motor failed after 112 hours of operation. New bearing lasted 33 hours before failure. Poor provision against leakage of grease; grease dripped into mixing bowl after less than 100 hours of operation. Poor design. Sample tested showed

excessive electric shock hazard. **Gilbert Kitchen Kit** (A. C. Gilbert Co.). \$21.50, including juice extractor. Essentially the same as *Sears' Powermaster* above.

Ward's Bettermix Cat. No.—5220 (Montgomery Ward, mail order only). \$15.95 plus postage, including juice extractor. Continuously variable governor-type speed control. Performance satisfactory on

kitchen tests. One sample failed in endurance test, by mechanical wear in speed control after 85 hours of operation. A second sample has run 170 hours satisfactorily. Materials and workmanship somewhat below average. Excessive radio interference in spite of condensers to eliminate it. Extremely high shock hazard, especially when running at low speeds.

• In the September *Reports* we announced that the employees of the American Safety Razor Corp. were on strike and had appealed to consumers to refrain from buying the products of this company. The strike was settled in August and the employees of this company have since then been working under a signed contract. News of the settlement, however, did not reach CU until after its September issue had come off the press. To the American Safety Razor Corp. our apologies for the error and our congratulations for the signing.

• Newest wrinkle in labor's union label campaign comes from San Diego. To celebrate their recent organization the Practical Nurses Union, Local 21549, AFL, will give a prize for the first baby to see the light of day under 100% union conditions. The announcement threw the San Diego Trades and Labor Council into an uproar as men and women delegates quibbled over their respective rights to the prize. "It's class legislation," observed a bachelor delegate.

• Add San Diego: in that union-minded city you can now get a steak with the union label plainly visible.

• You can get union-made hot dogs, too. Oscar Mayer & Co., one of the biggest of sausage manufacturers, has just signed up with the Amalgamated Meat Cutters and Butcher Workmen. Kingan & Co., one of the largest and oldest meat-packing companies, has done the same. This 100-year-old company employs more than 5,000 persons.

• It's a grim but necessary profession that is the latest to join union labor ranks. One hundred and fifty professional blood donors have organized themselves into an AFL union

The Labor Reporter

which possesses a charter barring strikes. The union seeks to standardize the rules by which donors are assigned and hopes eventually to achieve fees from \$7 to \$10 for 100 cubic centimeters of blood. The union members have offered to provide free blood to patients who cannot pay.

• Tipping, once characterized by Mrs. Roosevelt as "a beautiful way out for employers who won't pay a living wage," would be abolished by law under the terms of a resolution introduced to the N. Y. State Federation of Labor by Hotel and Club Employees, Local 6, New York City. William Randolph of that union estimates that \$200,000,000 a year is given out in tips, 60% of which goes to more than 375,000 waiters and waitresses in the country. In other words, the consumer is paying about \$320 a year on the wage of each of these employees. Since the average wage, *tips included*, is roughly \$11 to \$12 a week, Mr. Randolph seems justified in concluding that the tipping sys-

tem is a means for an employer to get consumers to pay more than half of his wage bill.

• Real Silk Hosiery has just renewed its agreement with the American Federation of Hosiery Workers, CIO. The agreement provides for a 10% wage increase.

• Four years ago the workers of Kohler Manufacturing Co., makers of plumbing products, went on strike. Many people do not know it, but the strike is still on. Pickets, including the parents and children of two murdered strikers, marched again in a memorial picket line recently and the labor press everywhere reminded workers of the continued boycott.

• Every American phonograph record will soon be union made, according to the enterprising United Electrical, Radio and Machine Workers union, CIO. The last unorganized company, Decca, is expected to be signed up soon.

• Meanwhile, the Capehart Co., which makes radio-phonograph combinations for the custom trade, has just hired "Blimp" McLeskey, well-known "labor relations expert." The labor movement knows him by other and more colorful names.

• From Cumberland, Md., comes a choice bit. This progressive metropolis recently turned down flat a \$113,000 WPA grant for a badly needed hospital, its officials claiming they were "fed up on relief." Simple disregard for the people's medical needs was, however, only part of the explanation of the city's action. The Cumberland City Attorney let the cat out of the bag when he pointed out that, under government regulations, the city would be compelled to pay "high wage rates!"

Industrial Insurance

WITH a heavy schedule of test projects getting underway, with space in the *Reports* at a premium, and with CU's insurance consultant engaged in the preparation of a new book, the scheduled series on industrial insurance is being withheld for the next two or three issues.

This series, when it does appear, will cover in detail types and terms of the industrial policies sold, and what these policies offer to the average buyer.

Monopoly at Work

Libby and Del Monte take the consumers, the farmers, the small canners and the workers for an expensive ride

ALL last year consumers were asked to pay a higher price for canned peaches than they had paid in seven years. And now, according to the canners, the market is so glutted that more than half of the California crop of cling peaches must drop from the trees and rot on the ground.

Some 2,700 peach growers face ruinous losses. A number of small canners are already bankrupt. Several thousand migratory farm laborers and cannery workers will have no jobs.

Consumer, farmer, small business man and worker take the rap.

Behind the debacle lies a story of complicated maneuvering on the part of the two big canners—California Packing Corp. (Del Monte) and Libby, McNeil & Libby.

All the facts, of course, are not available; government investigation must be relied upon to bring them out. From the California Farm Bureau Federation a request for an investigation, charging monopoly, was sent to U. S. Attorney General Cummings early in August. And the Attorney General's office has promised action. It is vital to the interests of consumers that that investigation go through.

Meantime, Western CU has consulted trade papers, industry associations, agricultural economists, farm organizations and trade statistical reports. Herewith we present the rough outlines of a picture of commercial collusion that dipped directly into consumer pockets all last year.

THE story might well begin with the first Iowan who sold out his business at home and came to the land of sun and beauty to invest his earnings in a peach farm. (California grows nearly 100% of the cling peaches, which, in turn, make up the great bulk of the commercially canned peaches.) But that would get into too long a story of successive Iowans drained dry in California farm speculation.

THIS article, prepared by the staff of Western Consumers Union, was published last month in the Western Section of the Reports. Although it relates to a local California situation, the direct and indirect implications of that situation concern consumers everywhere. The article is therefore being reprinted here so that CU's national membership may read it.

The recent, shorter story can well begin with a central figure, a prominent Oakland lawyer who has figured largely in canning affairs in California for a number of years. His name is Harrison Robinson.

Lawyer Robinson is currently the director of the Canners Industry Board. He's a number of other things besides. He has a law business. He owns some other businesses. Little is known exactly about the ramifications of any of them.

Before he was made director of the Canners Industry Board, Robinson was head of the California Processors and Growers Association. That organization was spawned in 1936. Prime mover in its setup was Del Monte. It was organized at a time when cannery

workers were beginning to form unions, and its purpose was to act as an employer united front on labor policies. Harrison Robinson was considered a "find" for that job.

As his assistant in running the Processors and Growers Association, Harrison Robinson brought in another lawyer whose name is J. Paul St. Sure. When Robinson left the Processors and Growers Association to become head of the Canners Industry Board, St. Sure took over his old job. The two are known to have worked closely together in the past. And the notion is widespread that they are, or until recently have been, partners. At the moment Lawyer St. Sure is representing Del Monte in a case brought against them by the NLRB.

LAWYER Robinson's concern, the Canners Industry Board, is something new. It was set up about a year ago, ostensibly by the smaller canners—which, in California, means everybody except Del Monte and Libby. Its purpose, Robinson has said, was to stabilize the canning industry of the State. It would do this by agreements between its members. One of those agreements was that none of its 30-odd members would sell canned cling peaches for less than \$1.55 a dozen for No. 2½ choice quality cans.

Now \$1.55 is a very high price. But it was necessary, said Robinson, because farmers had been paid such a high price for their peaches the Sum-



LAST YEAR THERE WAS A BUMPER CROP
... this year some 2,700 growers face ruinous losses

mer before. And it wasn't a monopoly agreement, according to him, because Libby and Del Monte were not members of the Canners Industry Board, thus not party to the agreement.

Since, according to Robinson, Libby and Del Monte together pack better than 50% of the clings, the Canners Industry Board agreement covered less than half of the pack. But Libby and Del Monte must have given a blessing to their old friend and business associate in his new job because they, too, offered not to sell their peaches below the high price set by the Board.

Under the small canners' agreement a time limit was set on the price fixing. That limit was the first of August this year—about the time the peach growers would have a new crop ready to market. The agreement held. Neither the smaller canners in the Canners Industry Board nor the two big canners sold for less until a week or so before the deadline.

THE results of this price-rigging operation were several:

(1) Only 8,000,000 cases of cling peaches were sold this year. Last year and the year before, the sale was 10,000,000 cases. And this 20% drop in sales took place despite an industry advertising campaign costing over \$300,000 which the peach farmers were taxed to pay for.

(2) A huge carry-over (unsold cans) of 5,500,000 cases lies unsold in the warehouses instead of the usual carry-over of about 3,000,000 cases.

(3) The small canners face bankruptcy because of the loss they must sustain on this excessive carry-over.

(4) Because of the carry-over, farmers are now being offered as low as \$5 a ton for their peaches when it costs them at least \$20 a ton to grow them.

Who benefits from all this and how?

By and large, and in the long run, the canning business has been highly profitable and Del Monte has been by far the biggest profitmaker (except for the can companies, which is another story). Since the depression, however, the domination of Del Monte and runner-up Libby has been made less serene, although not really threatened, by the entry into the packing industry of a number of tiny newcomers. These little fellows had no big financial backing. They didn't build



CALIFORNIA PEACHES

In the warehouses, 5,500,000 cases

new canneries, generally, but simply leased old canneries that had shut down during the dark days of 1930-33.

Their entry into the field was made possible primarily by a quirk in competition between the two big can companies—American and Continental. In lots of ways, American Can and Continental Can do not act like competitors. For instance, they have maintained the price on cans like good partners all through the depression. But American, far and away the bigger of the two, had long-term contracts with the major canners on the Pacific Coast. Continental wanted a slice of this business. And so it happened, according to the trade, that Continental got big-hearted and made it possible for the newcomers to start in business by giving them credit.

These little canners couldn't afford to put their goods into warehouses and wait until they could sell at high prices. They had to sell right off in order to pay Continental. So they generally sold their goods at prices that simply allowed them to stay in business. And those prices were considerably below what Del Monte and Libby

wanted to sell for. While the total volume of business done by the little fellows wasn't large, it was enough to make trouble for the big canners.

Del Monte and Libby couldn't do anything about the closed-down canneries their little competitors had leased. And they couldn't do much about Continental Can. They could, however, do something about raw material prices—about peach prices.

Both Del Monte and Libby are owners and operators of big peach farms. Besides the farms they own, they likewise control the output of a hundred or so huge farm corporations via long-term contracts. Exactly how much of the peach crop is thus directly controlled by the big canners nobody knows, but some in the industry say that it is as high as 50% of the crop.

Now it happened that last year there was a bumper crop of cling peaches. Despite the big supply, Del Monte and Libby went into the field and—bought at prices 50% higher than they had paid the year before. The trade price for canning clings went up to \$45 a ton. The smaller canners and the very little newcomers had to pay that price and did. They took a life-and-death risk in doing so, but not to have bought would have meant going out of business.

When the Fall of the year came around peaches weren't selling; they were too high. Then Lawyer Robinson came into the picture with his price-rigging scheme and the smaller canners fell for it. Again they risked their commercial lives. True, Del Monte and Libby kept their prices up, too; but they didn't risk much.

In the first place, these giants have large sales forces and advertising budgets. They are in a position to move a good part of their goods through wholesale and retail channels via this sales and advertising pressure. The smaller canners, who can't afford big advertising appropriations, must sell on a price basis to move their goods in competition with Del Monte and Libby. But with the smaller canners hog-tied through the agreement with the Canners Industry Board, Libby and Del Monte had no price competition to worry about.

In yet another way Del Monte and Libby had an advantage not available

to small canners. Pineapple is a competitor of canned peaches. When canned peaches get too high, consumers are likely to buy more pineapple and less peaches. Now three canners do almost all of the pineapple packing. They are Hawaiian Pineapple Co. (Dole), Del Monte and Libby.

So there they stand, Del Monte and Libby. Their pineapple sales look rosy. And on peaches they've got the small canner coming and going. If he drops his price on his peaches now he runs the risk of bankruptcy because it cost him so much to buy them. If he doesn't drop his prices he won't sell many and Del Monte and Libby will move their own in large and profitable volume because they won't face any price competition.

Meantime the farmers face ruination. The carry-over is so big that the small canners have been afraid to pack much, hence the cannery workers as well as the farm laborers and farmers are sacrificed. And the big canners do not plan to pack much either, hence more cannery jobs go.

Already, according to the *Pacific Rural Press*, Del Monte has sold some of the peaches grown on its own farms. Both Del Monte and Libby can buy up from the bankruptcy sales of small canners this year and get peaches cheaper than they themselves could pack them. Nor does this mean that consumers are likely to get peaches at a very much cheaper price. Del Monte and Libby can afford to wait.

HERE in skeleton is a case history of the effects of business combine and monopoly on the economic life of the country. Consumers, farmers, small business men (in this case, small canners) and workers bear the brunt of this raid on their resources.

There is some evidence that the canners realize they may have gone too far in this game. The farmers are angry. The canning companies are looking for a convenient red herring. There is talk about ringing in the Associated Farmers to draw such a fish across the trail. Western CU has heard that this organization is proposing to launch a campaign to persuade California peach farmers that organized labor, not organized monopoly, is behind the ruin that faces them today.

But the facts are as you've just read them.

The Dry-Cleaning Gamble

*... is one of the biggest in the marketplace. Here-
with an outline of the kind of service consumers should
demand and improvements they should work for*

CONSUMER A takes a suit of clothes to the Great Stuff Dry-Cleaning Emporium around the corner on a side street. The artisans of the establishment, he learns from 11 signs in the window, will make him weep for joy over the wonders of the job they are prepared to do for him. And all for 39¢.

Meanwhile, Consumer B Plus proceeds to the Ever-So-Fine Dry Cleaners on the avenue, and there leaves a dress. When she gets it back, a card in the window intimates, she will be able to win her husband's love again and resume her old social standing. This will cost her \$1.75.

We hope both of them get all they're promised. But we doubt that they will. It is possible that, for all the differences in the store fronts and the prices, both Great Stuff and Ever-So-Fine have their actual work done in the same plant. There is strong likelihood that Consumer A's 39¢ job will make him weep, but not for joy. And Consumer B Plus' \$1.75 job may be little if any better.

For when the consumers set forth to purchase dry-cleaning service they are getting into one of the many gambles of the marketplace. Ordinarily, they have no way of knowing in advance just what treatment their garments will receive; nor, when they get them back, are they able to tell just what treatment they did receive. Dry-cleaning service ranges from good to very, very bad, and it bears small relation to the price charged. It is subject to no control, governmental or otherwise, in the interest of consumers.

CU would perform a first-rate service if it could give its members guidance in the selection of a satisfactory cleaner. The unfortunate fact is that, because of the highly local nature of the dry-cleaning business, it can't be done. But CU can outline

what a good dry-cleaning job should include, thus to help its members know what kind of service to demand. And it can indicate lines of possible improvements in the business, but it is unlikely that changes will be made until there is a demand by consumers themselves. First, the successive steps in a good dry-cleaning job:

Sorting and inspection. The garments are divided into groups so that they may be given different treatments according to fabric, color and condition. White or light-colored clothing is separated from dark. Some garments are put aside for washing with soap and water as the cleaning method best suited to them; garments which would be ruined by ordinary dry-cleaning methods are reserved for special treatment (a good cleaner will recognize these in advance and, in some cases, accept them only at the customer's risk). Needed minor repairs are noted. Buttons, buckles and ornaments which might be damaged are removed. Pockets are searched and any contents kept for the owner. Cuffs, pockets, sleeves and seams are turned, accumulated lint and dirt are brushed out. Garments apt to shrink or stretch are measured so that corrective treatment may be applied after cleaning. Identification marks are placed on the garments.

Cleaning with solvent and soap. Large batches of the garments are then agitated in a tank containing a solution of dry cleaner's soap and solvent, usually carbon tetrachloride, specially refined naphtha (Stoddard Solvent), or chemically similar liquids which remove grease and dirt effectively. The soap is of a special type, designed to improve the solvent's cleaning efficiency. As the garments become clean, the solvent of course becomes dirty, and must be clarified—treated physically and chemically to remove grease and dirt. In the best



ON THE AVENUE*



DOWN A SIDE STREET*

Their prices may be miles apart, likewise the quality of their cleaning. The consumer can find out about price; about quality he can tell but little

plants the solvent is continuously circulated between the tank and an efficient clarifier.

Rinsing. The garments are now rinsed with fresh, clean solvent, to remove the soap and any remaining dirt and grease.

Drying. Most of the solvent is thrown out of the garments by a centrifugal drier, then drying is completed by means of hot air. If poorly done, or if an improper solvent is used, an odor may remain.

Spotting. Many kinds of spots must be given special attention. The best dry-cleaning plants employ skilled "spotters" who, through long experience, are able to recognize the nature of most stains and know the proper chemical treatment to use on them. Consumers can obtain better service if they attach a note to any garment soiled by an unusual substance, telling the nature and age of the spot.

Finishing. The garments are now pressed—hastily by machine in the poorer plants, carefully by hand in the best ones. Any shrinking or stretching is corrected so far as possible. Finally, any ornaments which have been detached are replaced.

This outline picture of a good dry-cleaning job makes it easy to understand in what ways the "chiseler" or slipshod cleaner may cheat his customers. He may do it by:

1. Omitting the cleaning process entirely, and giving the garment no more than a "sponge and press."
2. Using dirty solvent which has been clarified poorly or not at all.
3. Omitting the soap, thus lowering cleaning efficiency.
4. Skimping on the cleaning time.
5. Using only machine pressing.
6. Curtailing or omitting the spotting treatment, by employing unskilled "spotters," or by using improper spotting treatments which weaken or damage the fabric.
7. Failing to clean dark garments as thoroughly as light.
8. Neglecting to carry adequate insurance on garments (important because of the great fire hazard in plants using inflammable solvents).
9. Dodging damage claims.

The individual consumer can only partially judge the quality of dry cleaning work. He can tell whether the garment has been carefully pressed, and he can and should examine it for spots, for residual odor, for lint and dirt in pockets and cuffs, for damage to color or fabric (acetate rayon or Celanese fabrics are especially subject to damage from improper cleaning and pressing), for shrinkage or stretching, for unmade repairs, for missing ornaments or trimmings. Any evidence of a poor job or damage provides just cause for complaint.

But concerning the most fundamental question of all—how well the dirt has been removed—the consumer can tell but little, especially in the case of dark garments.

Nor is price a reliable indication of quality. A very low charge almost inevitably means a poor job, but, on the other hand, a high price is no guarantee of a good one. Cost comparisons are meaningless until consumers have some accurate way of judging the quality of work done.

In the past few years many cleaners have adopted the practice of offering two or even three grades of service at various prices, a system which might be desirable if the consumer were told just what each service included. Unfortunately, he is not. Such names for the different services as "Preffo," "Thoro-Kleen," "Thrifty-Kleen," "Secco," "Depression," "Economy-Kleen" are of no aid. In using high-priced service, the consumer should at least demand to know what that service includes that the lower-priced services do not.

ANY effort to bring order out of the present chaotic state of the dry-cleaning industry, which works to the detriment of consumers and honest cleaners alike, calls for standards and specifications accurately defining good work. Such standards have been formulated by technicians. Furthermore, laboratory tests have been devised which provide a basis for evaluating how well these standards have been met. Some typical tests:

1. A "cleaned" garment is re-rinsed in "water-white" (clear and colorless) solvent. Measuring the extent to which the solvent is darkened gives an indication of the amount of dirt which remained in the garment after cleaning.
2. Test pieces of fabric (preferably entire garments, to avoid detection by the cleaner) are treated with an artificial soiling mixture, which gives them a definite amount of "dirtiness." On return from the cleaner, they are examined with an instrument which accurately measures the cleanness by comparing the amount of light they reflect with that reflected from a standard white surface.
3. Clean white pieces are sent to the cleaner, then tested to see how much darker they have become due to dirt in the cleaning solvent.
4. Samples of cleaning solvent from the dry cleaners' tank are tested for cleanness.
5. The entire dry-cleaning plant is inspected and examined by an expert technician.

* The two establishments pictured here serve an illustrative purpose only. Comments in the article are not intended to apply to either.

Standards and test methods, then, are available. They are sufficiently clear cut so that an establishment meeting them would have to turn out satisfactory work. Standards, however, are useless unless and until they are enforced; and enforcement waits upon organized consumer pressure.

WHAT this means to consumers, specifically, is that general indignation over bad work must be translated into direct efforts to realize one of the following possibilities:

Government regulation through a law setting up compulsory standards for dry cleaning work and providing for their enforcement by a government agency. This is the best way to improve dry-cleaning service, and one which consumers should demand.

Guarantees by the dry cleaners themselves to meet certain standards. Such a plan has serious limitations unless an independent agency is set up to enforce compliance with the guarantees, but its adoption might at least mean an improvement over the present situation.

Certification by an independent, unbiased agency, governmental or otherwise. Under this plan cleaners making application would be tested and those meeting requirements would be certified. Frequent check tests would be made. Consumers in each locality would then look for the certified cleaners in their locality and choose the one with fairest prices.

An attempt is already being made to certify cleaners by a new commercial organization known as the Institute for Maintaining Drycleaning Standards of the United States and Canada. It claims to make inspections and tests of dry-cleaning plants which apply to it and to certify only those "which meet its rigid requirements and accept its technical control." Investigation shows the Institute to be relatively free from control by dry cleaners (although not subject to as much consumer control as is desirable), and to have a well-planned testing program.

Unfortunately, certified plants are located in only 69 localities at present and few of these are in large cities. A list of them may be obtained from the Institute at 254 West 31 St., NYC. We would be interested to hear from any CU members who try out the certified plants.

Reports on dry-cleaning establishments for local consumer groups.

Tests of the sort indicated above could be made by a qualified, unbiased laboratory, and cleaners rated in order of the quality of their work. Members

of a group would have to pay a fee to meet the costs involved, but if the group were not too small, its members should be amply repaid in time through lower prices or improved quality of their dry cleaning.

Dry-Cleaning Workers

THE dry-cleaning industry can be divided into three major classifications: (1) wholesale plants; (2) independent tailor, cleaning and pressing shops, a few of which do their own work, but most of which turn it over to a wholesaler; (3) chain store organizations which operate their own plants and retail outlets.

Workers in the industry are particularly subject to industrial health hazards. A U. S. Public Health *Bulletin* of December, 1934, states that practically all dry-cleaning workers in a test survey "were found using materials of a solvent nature, the largest number of workers (10.7%) being exposed to chloroform, with carbon tetrachloride and ammonia showing 9.8% and 9.7% of the exposures, respectively. The potential problem in this industry arises from the use of such solvents as those just mentioned with the addition of benzene, benzol and methanol."

Medical literature contains frequent reports of serious illnesses and even deaths caused by working with these chemicals under improper conditions.

As the number of dry-cleaning establishments is legion, no adequate listing of labor conditions can be provided. Nor is any attempted here. What follows is a brief note on organization in the New York area, chief center of union activity to date.

The small retailers, of whom there are about 12,000 in Greater New York alone,¹ according to the Cleaners and

Dyers Board of Trade, are small businessmen. Though their incomes are generally low (their average annual gross receipts for 1933 were less than \$2,500), their hours unrestricted and their economic status uncertain, these dealers do not come within the province of this report. Most of them do not hire any help. They do no major cleaning themselves but merely collect garments for distribution to centralized wholesale plants.

Aside from these, the dry-cleaning industry has been subject to organization by both the AFL and CIO. And in New York City, the Cleaners, Dyers, Pressers, Drivers and Allied Trades Union, Local 239 (an affiliate of the Amalgamated Clothing Workers of America, CIO) claims to have the industry almost 100% organized. Five thousand workers in wholesale plants, chain plants and retail chain and independent stores are reported as union members.

Only important company in the New York area not yet organized, according to the union, is Kent Stores, Inc., with a plant at Whitestone, Long Island, and stores throughout Brooklyn and Queens.

The union contract provides for a minimum of 35¢ an hour for unskilled workers, a work week of 40 hours for all plant employees and 48 hours for female clerks. Wages are lower, hours are longer and speed-up appears to be common in unorganized plants. Protection on the job for all members is assured by the union contract, which also provides for six legal holidays with pay and time and one-quarter for overtime. The contract provides for an impartial arbitrator in case of disputes.

According to Julius Cohen of the N. Y. Cleaners' local, the Amalgamated Clothing Workers is now extending its organizational work in the dry-cleaning field throughout the country.

¹ In 1933, according to the Statistical Abstract of the U. S. (1936), there were 55,459 cleaning, dyeing and pressing shops in the U. S. which were reported as having 59,965 proprietors. These shops did a volume of \$135,611,000. Additional data, admittedly incomplete, indicates that there were also in that same year 3,594 cleaning and dyeing establishments using mechanical power (apparently this figure comprises the wholesale, retail and chain plants). The industry had a total of 4,981 salaried employees and an average of 43,619 wage earners. A volume of \$93,314,000 was reported, to which should be added \$14,494,000 for cleaning work done by 1,094 power laundries.

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Back Issues—Low Prices

This listing gives partial contents of all issues of CU Reports published through August, 1938.

MAY, 1936—Hosiery, Alka-Seltzer, Toilet Soaps, Milk, Toothbrushes.

JUNE—Vegetable Soup, Vegetable Seeds, Anacin, Baume Bengue.

JULY—Used Cars, Travel, Cooperative Distributors.

AUG.—Heating Equipment, Hosiery (higher priced), Bread, Laundry Soaps, Coney Island (bacterial tests).

SEPT.—Shoes, Tires, Whiskies, Hot-Water Bottles, Rubbers.

OCT.—Dentifrices, Men's Shirts, Coal and Oil, Brandy, Gins, Rums & Cordials.

NOV.—Children's Shoes, Electric Toasters, Baking Powder, Wines.

DEC.—Vacuum Cleaners, Mineral-Oil Nose Drops, Electric Irons, Fountain Pens, Woolen Blankets, Tomato Juice.

JAN.-FEB., 1937—Men's Suits, Shaving Aids, Hand Lotions, Maple Syrup.

MARCH—Sheets, Face Powders, Flour, Canned Asparagus & Cherries.

APRIL—Aminopyrine, Cold Cream, Men's Shirts.

MAY—Trailers, Washing Machines, Constipation.

JUNE—Large Cameras, Sanitary Napkins, Constipation.

JULY—Miniature Cameras, Fans, Ice Boxes, Constipation.

AUG.-SEPT.—Ice Cream, Photographic Equipment, Inner Tubes, Fish Bait, Raincoats, Electric Clocks, Constipation.

OCT.—Auto Radios, Cereals, Heating Equipment, Constipation.

NOV.—Anti-Freezes, Portable Typewriters, Men's Hats, Constipation (concluded), Sewing Machines.

DEC.—Electric Shavers, Lipsticks, Cigars, Toys, Dolls, Radios.

JAN., 1938—Lisle & Rayon Stockings, Men's Shorts, Batteries, Vitamins.

FEB.—1938 Automobiles (ratings), Vitamins A & D.

MARCH—Coffee, Razor Blades, Mechanical Pencils, Depilatories, Women's Shorts, Canned Corn, Vacuum Cleaners.

APRIL—Tuna Fish, Electric Ranges, Electric Heating Pads, Mattresses, Radio Antennas.

MAY—Permanent Waves, Waftle Irons, Razor Blades, Canned Peas & Apricots, Bicycles & Velocipedes, Springs.

JUNE—Canned Dog Foods, Refrigerators, Canned Fruits & String Beans, Men's Handkerchiefs, Cleansing Tissues.

JULY—Cigarettes, Sunburn Preventives, Sunglasses, Gasolines, Motor Oils.

AUG.—Coca-Cola, Catsup, Cameras & Equipment, Sneakers, Furs.

Oil Burners & Coal Stokers

A report, with ratings, on gun-type, vaporizing and wall-flame rotary burners; boiler-burner units; bituminous and anthracite stokers

ABOUT 75 out of 100 oil burners sold today are of the gun type. Every well-known burner manufacturer has at least one model. And advertising claims to the contrary, they are all pretty much alike. If skillfully installed and serviced, if made of standard parts, one make will perform just about as efficiently and dependably as another. For most homeowners, a standard gun-type burner will prove the "Best Buy."

CU's field investigations show clearly the folly of buying on the name-value of a large manufacturer. Burners supposedly made by Carrier Corp., Fox Furnace, Holland Furnace, Kelvinator, Norge or Westinghouse were found to be the products of other, generally smaller, manufacturers.

Nor is price a better indication of quality. Many manufacturers sell their burners to dealers, together with complete controls, at \$55 to \$65; others charge their dealers \$90 to \$120 for identical equipment. The consumer may therefore pay a double price for a burner possessing no special merit other than a nationally known name-plate.

It goes almost without saying that the consumer should not be misled by special features fancifully designated as "Progressive Rotation," "Rotaire Diffuser," "Aero-Diverter," "Multiple Atomization," "Elevated Contra-Flow," "Turbometer," "Turbo-Blast," "Whirlator," "Thrifty-Fier," "Tripilator," "Double Mix Nozzle," and the like. CU has found that these trick features not only fail to improve the operation of the standard burner, but sometimes actually interfere with efficiency.

Two criteria to which the consumer should give full consideration are: (1) Will the dealer provide really good in-

stallation and service and properly test the efficiency of the complete job? (2) Is the burner built of standard parts?

Dealer & Tests

THE necessity of selecting a reliable and skilled dealer—no matter what burner you buy—cannot be emphasized too strongly. Favor the dealer who is a burner specialist, who has been in the business no less than five years, and who has his own installation and service departments. Inquire of at least a dozen of the dealer's customers as to his installation and service reputation. The assertions of some manufacturers that they permit only reputable dealers to handle their products are not to be relied upon.

Good dealers test the efficiency of their installations by means of special instruments—a flue gas analyzer, a draft gauge and a stack thermometer.

The most important test consists of determining the CO₂ (carbon dioxide) content of the flue gases—the higher it is, the more efficiently the fuel is being burned. For maximum protection, buy only from a dealer who will give you a written guarantee that on test the completed installation will show "a minimum of 10% carbon dioxide in the flue gases, with the burner operating normally and dependably, and giving no perceptible chimney smoke."

Stack temperature is important but cannot be guaranteed unless a new furnace or boiler is purchased.

Parts & Makes

DISTINCT advantages come from buying burners built of standard parts listed in the accompanying table. These

CONSUMERS UNION Reports

are used in many good burners, are known to be well designed for excellent performance and long life, are easily obtainable, and can be replaced least expensively.

Electrol, Quiet May, Delco and several other less well-known gun-type burners have oil pumps and other major parts of special design. In some cases these may be inferior and always are more costly to replace than the standard parts which are used more commonly.

As to make of burner, you are safe in buying any of the standard gun-type burners listed as "Acceptable." The *Williams Model HP-3*, a typical gun-type burner offered at less than \$200 for a complete 275-gallon tank installation, was cited in CU's 1937 report as an outstanding "Best Buy." Our comments regarding it still hold true, but whether it will be a better buy than other makes listed as "Acceptable" will depend upon its price in your community.

The standard low-pressure gun-type atomizing *Williams Oil-O-Matic* burner is also especially well engineered, and holds excellent longevity and service records. It burns heavier oils than do small gun-type burners (an advantage lost in cities where no heavier, cheaper oil is sold than that used in standard gun-type burners). A second advantage is that it gives the small flames needed in some small boilers and furnaces for maximum efficiency. Disadvantages, as compared with the *Williams HP-3* and other gun-type burners, are higher price and the fact that it is constructed entirely of special parts.

The new *General Electric* conversion-type gun oil burner, whose parts are identical with those in the original line of *GE* oil furnaces, employs the mixing nozzle or low-pressure air principle used also in the *Oil-O-Matic* and other burners. The compressor unit, however, is smaller than that used in the *Oil-O-Matic*, and the burner parts and controls are sufficiently different from orthodox accepted construction as to make it almost imperative that all servicing be done by a *General Electric* dealer. These characteristics, along with the fact that the retail price is apt to be from \$60 to \$90 higher than that of comparable burners, make the *GE* burner "Not Acceptable."

Vaporizing Burners

THE natural draft vaporizing or pot-type burner, without blower and motor, cannot perform comparably with modern burners. The blower-equipped vaporizing burner also performs poorly. It tends to smoke and soot; in a number of homes it has caused repeated chimney fires; and it gives high fuel bills because it burns, at low efficiency, light, costly oils. CU lists vaporizing burners as "Not Acceptable."

Wall-Flame Burners

WALL-FLAME rotary burners, in comparison with gun burners, are more delicate and sensitive, more difficult to service and to install, and more susceptible to trouble from improper, heavy or contaminated oil. In addition, they need the attention of specially trained men and require special repair parts available only from dealers or manufacturers. Service expenses may, therefore, be high.

Nevertheless, the quiet operation of the modern wall-flame rotary burner can be an important advantage. Unlike the gun burner, whose flame comes

on with full force suddenly and often with a jar or pulsation, the wall-flame rotary starts gradually and quietly—its burning rate builds up to normal only after a few minutes operation.

In small boilers and furnaces, especially those poorly suited to oil-firing because of short flue travel, the wall-flame rotary often gives lower fuel bills than a gun burner using the same grade oil.

Bituminous Stokers

WITH a bituminous stoker, as with an oil burner, it is of paramount importance to find a qualified, reputable dealer. He must be honest enough to tell you if your present heating plant is unsuited for stoker firing. He must be capable of making or supervising the renovations often needed on old heating plants. He must be experienced enough to handle only stokers well suited to local coal—for bituminous stokers of a given make do not burn all types of bituminous coal equally well.

Finally, whether or not you obtain a stoker at a fair price depends on the dealer, since installed prices vary even in the same community because



TESTING FLUE GASES FOR CO₂

CU's investigations of heating equipment included a CO₂ test on scores of installed oil burners. Willingness to make this test, which provides the only numerical index of efficient combustion, often distinguishes a good dealer from an unreliable one. Insist on a guarantee that the completed installation will show a minimum of 10% carbon dioxide in the flue gases.

of the special work sometimes required by the peculiarities of specific plants.

Combustion testing, customary for industrial jobs, is rarely done on domestic installations. And the exceptional dealer who performs it merits your confidence. The type of efficiency guarantee outlined for oil burners is desirable for stokers but is more difficult to obtain because of greater irregularities in stoker fires and because few stoker dealers make efficiency tests.

Stokers are easily assembled from standard parts — controls, motors, transmissions, gears, belts, blowers, feed worms and their housing. Hundreds of brands, merely put together by their "manufacturers" from parts made by small companies, are known only in certain areas. They may, however, be excellently suited to the coal available there. On the other hand, a few manufacturers design and themselves make all the parts of their stokers (except motor and controls) and market their products nationally. These stokers are better engineered, in the opinion of some experts, and are likely to be better buys provided they will satisfactorily burn the coal locally available.

THE success of your bituminous stoker depends on:

1. The adaptability of your furnace or boiler to stoker firing. It must have sufficient combustion space to permit clean burning of the volatile gases released at a high rate; high-volatile coals require additional combustion space. When the stoker is installed the easiest way, with its hearth located at grate level, the results are often unsatisfactory, because of insufficient space. To raise or pit a boiler requires extensive work and it is apt to be an even more difficult job with a warm-air furnace. In many cases a new, specially designed boiler or furnace is necessary for best results. The furnace or boiler also requires sufficient flue travel to give low stack temperatures under the intense firing.

2. A chimney that is clean, tight, and large enough to give sufficient draft. A good dealer often tests a questionable chimney, using a draft gauge and making a smudge or smoke test for tightness.

3. A good heating plant that will distribute the heat evenly to all rooms and which wastes no heat by running excessive temperatures in the basement. The competent dealer checks the installed heating plant before recommending a stoker.

Construction & Prices

As for the stoker construction:

The motor should be fit for heavy-duty continuous service. Make sure the stoker you buy is not underpowered, and not equipped with a "competitive" short-life (intermittent service) motor. An electric-type "overload protector" that stops the motor when it tends to overheat or draw excess current for more than a certain number of seconds is decidedly advantageous. It is standard equipment on some high-grade stoker motors, and can be had as an extra for any motor. The use of fuses or "shear pins" does not eliminate the need for one.

The transmission is highly important, for it also must stand up during long years of hard service. CU finds that if the transmission is sufficiently durable and rugged it will give excellent service whether it is hydraulic, continuous automotive, or intermittent roller-clutch or ratchet type. It is necessary that adequate lubrication be provided. Three or four feed rates are desirable but the transmission feature that gives a continuous range of feed rates is considered of no extra value.

An automatic air regulator, or some type of control to fit the air rate to the coal feed rate, or vice versa, is distinctly advantageous. It reduces the manual attention necessary to keep the firebed at proper thickness and assures high efficiency. Many "automatic air regulators," however, fall short of being practical.

Controls are all-important.³ If the stoker you favor is equipped with controls you suspect to be inferior, ask the dealer to quote an extra charge for better ones. Automatic, swinging-disc type draft regulators for the smokepipe are regularly supplied by some dealers and are desirable.

NOT counting extra charges for special boiler or furnace and heating plant work, stoker prices should range

from about \$185 to \$250 for hopper-fed models. The Iron Fireman Co. and some others set no regular selling price and their dealers have been known to install undersize stokers and resort to high-pressure methods in order to build sales. Bin-feed equipment varies greatly in price depending on the manufacturer and the details of the particular job.

Since prices vary greatly, your best procedure is to obtain prices from several local stoker dealers, try to determine which stokers offered are of the "competitive" or light type, and which are standard, heavy-duty models, then to buy from the dealer in whom you have the most confidence and trust.

Any of the stokers listed can give excellent results in a plant suited to stoker firing. Stokers marked as being especially well engineered can give unusually good performance and high efficiencies when properly installed and adjusted, but cannot offset the disadvantages of poor workmanship on the part of a dealer.

Anthracite Stokers

ANTHRACITE stokers do not need a dealer-installed hearths, thus their burning efficiencies are more readily controlled by the manufacturer. They require less combustion space and so may be installed in many boilers and furnaces not suited to bituminous models. They can be equipped with ash-removal devices, impractical when bituminous coal is used because of its tendency to form clinkers which must be removed manually.

In the Northeastern States where anthracite stoker coal is available, it is slightly more expensive than bituminous, but has the advantages of being remarkably uniform (and therefore, if the right size to begin with, practically always suitable to the stoker) and of burning easily with no smoke.

Much of the data previously given is relevant to anthracite as well as to bituminous stokers. As has been constantly emphasized, you must select a reliable dealer. Unlike a bituminous model, the poorly installed and serviced anthracite stoker does not give chimney smoke. But it may break down, spread odors and ash through the house, heat unevenly or fail to

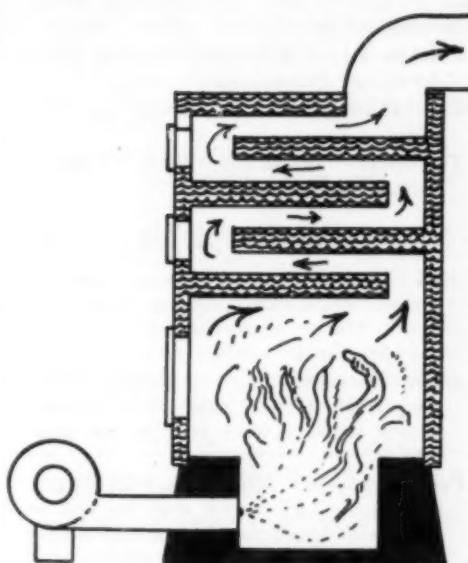
provide sufficient heat in severely cold weather, and run excessively high fuel bills.

The *Electric Furnace-Man* is believed to be the best-engineered anthracite stoker on the market. The design is highly practical—a factor clearly reflected in its owners' experiences and fuel bills. In addition there is evidence that the manufacturer has attempted to build a capable and conscientious dealer organization.

The features that account for this make's excellent performance include: (1) a revolving retort that causes fine coal particles to be distributed equally throughout the fuel bed (in some makes they tend to pile up in the back); (2) automatic "fines-removal" device to keep the windbox clear of fine coal particles (in some stokers these must be removed periodically by hand, and failure to remove them leads to serious trouble); (3) blower wheel that can give exceptionally high air pressures; (4) "ash-wiper" affect—provided by stationary wipers near the revolving retort (in some other stokers the same effect is obtained from revolving wipers moving around a stationary retort); (5) satisfactory ash-removal device of the bucket-and-chain type.

The motor of the *Electric Furnace-Man* runs 24 hours a day throughout the Winter. This has not been found to increase wear or to result in appreciably higher electric bills than a larger motor working at intervals. And the arrangement does provide steady heating not duplicated by on-off firing devices whether they be stokers or oil or gas burners. *Most can be made of this advantage when the stoker is used with a special four-position thermostat*, which is distinctly preferable to the two-position, or on-off thermostat controls available at a lower price. The "modulated" type control, both more expensive and more apt to cause trouble, is not recommended.

Those who find the *Electric-Furnace-Man* too high priced should consider one of the other "Acceptable" stokers (which may cost from \$50 to \$150 less) provided it is especially well installed and serviced. CU finds that some low-priced stokers are well engineered and can be highly economical and satisfactory, despite "scare" salestalk to the effect that



GUN-TYPE OIL BURNER

money which is spent on a low-priced stoker is usually money wasted.

Gun-Type Burner Parts

The manufacturers' names after each item are listed in order of preference. If the dealer can provide it, demand the product of one of the first manufacturers listed:

OIL PUMP AND FUEL UNITS: **Webster, Tuthill, Viking, Sundstrand.**

ELECTRIC MOTORS: **Century, Emerson, General Electric, Ohio, Delco, Leland, Westinghouse.** Types of motors are given preference in this order: 1. Capacitor; 2. Split phase; 3. Induction repulsion. Induction repulsion motors cost more than split-phase motors, but give more trouble in oil burners.

CONTROLS: **Minneapolis - Honeywell, Penn Electric Switch.**

STRAINERS: **Monarch, Webster, Detroit, Eddington, Cuno, Purolator.**

IGNITION TRANSFORMERS: **Jefferson, Webster, Dongan, General Electric.**

Gun-Type Burners

Any gun-type burner listed as "Acceptable" below is a "Best Buy" when sold for \$200 or less, and installed, serviced and tested by a reputable dealer as explained in the text. Preference should be given to burners made of standard parts listed in the accompanying table. Price should include fuel gauge, installation permits and first-year service; also automatic draft regulator. The lightest "14-gauge" tank is believed to

be too light for safety and long life. Some conscientious dealers install the heavier "12 gauge" at no extra charge. The heaviest tank used in 275-gallon sizes is the "10 gauge"—required in New York City—and desirable for homeowners who are willing to pay two or three dollars extra for maximum safety. Clock thermostats cost from \$10 to \$25 extra, depending on the model installed.

Several of the companies listed below manufacture vaporizing and wall-flame type burners.

Acceptable

(Order has no significance)

- ABC** (Automatic Burner Corp., Chicago).
- Airtemp** (Chrysler Corp., Detroit).
- Arco-Flame** (American Radiator Co., NYC).
- Auto Heat** (Auto Heat Corp., NYC).
- Bethlehem Doe** (Bethlehem Foundry & Machine Co., Bethlehem, Pa.).
- Bettendorf** (Micro-Westco, Bettendorf, Iowa).
- Braden** (Braden Engineering, Providence, R. I.).
- Branford** (Malleable Iron Fittings Co., Branford, Conn.).
- Caloroil** (Caloroil Burner Corp., Hartford, Conn.; subsidiary of Silent Glow Burner Corp.).
- Carrier** (Carrier Corp., Syracuse, N. Y.).
- Century** (Century Engineering Corp., Cedar Rapids, Iowa).
- Delco-Heat** (Delco Appliance Corp., Rochester, N. Y.; div., Gen. Motors).
- D'Elia** (D'Elia Oil Burner Co., Bridgeport, Conn.).
- Diesel** (Diesel Burners, Moosup, Conn.).
- Electrol** (Electrol, Inc., Clifton, N. J.).
- Esso-Heat** (Gilbert & Barker Mfg. Co., Springfield, Mass., subsidiary of Standard Oil of N. J.).
- Everedy** (Oil Burner Builders, Inc., Bellevue, Iowa).
- Fairfield** (Fairfield Oil Heating Co., Greenwich, Conn.).
- Fluid-Heat** (Anchor Post Fence Co., Baltimore).
- Fox Furnace** (Fox Furnace Co., Elyria, Ohio).
- Gar Wood** (Gar Wood Industries, Detroit).
- Gold Star** (Gold Star Oil Burner Mfg. Co., Yonkers, N. Y.).
- Heil-Combustion** (Heil Co., Milwaukee).
- Herman-Nelson** (Herman Nelson Corp., Moline, Ill.).
- Holland** (Holland Furnace Co., Holland, Mich.).
- Kelvinator** (Kelvinator Corp., Detroit).
- Kleen-Heat** (Kleen-Heat, Inc., Chicago).
- Masterkraft** (Harvey-Whipple, Springfield, Mass.).
- Motor Wheel** (Motor Wheel Corp., Lansing, Mich.).
- National** (National Radiator Corp., Johnstown, Pa.).
- Norge** (Borg-Warner Corp., Detroit).

Gun-Type Burners—cont'd

Nu-Way (Nu-Way Corp., Rock Island, Ill.).
Petro (Petroleum Heat & Power Co., Stamford, Conn.).
Pressure and Leader (Pressure Oil Burners, Inc., York, Pa.).
Quiet-Heat (Quiet-Heat Mfg. Corp., Newark, N. J.).
Quiet May (May Oil Burner Corp., Baltimore).
Rexoil (Reif-Rexoil, Inc., Buffalo, N. Y.).
Scott-Newcomb (Scott-Newcomb, Inc., St. Louis, Mo.).
Silent Glow (Silent Glow Oil Burner Corp., Hartford, Conn.).
Sun-Glo (Sun Glo Co., NYC).
Timken (Timken Silent Automatic Co., Detroit).
Toridheet (Cleveland Steel Products Corp., Cleveland).
Trojan (Crane Co., Chicago).
United States (United States Burner Corp., Hartford, Conn.).
Universal (Universal Manufacturers, Inc., Ridgewood, N. J.).
Volcano (Volcano Burner Corp., NYC).
Waltham (Julian D'Este Co., Boston).
Williams Model HP-3 (Williams Oil-O-Matic Heating Corp., Bloomington, Ill.).
Williams Oil-O-Matic. Low-pressure gun-type. See comments in introduction.
York (York Oil Burner Co., Inc., York, Pa.).
York Ice Machine (York Ice Machinery Corp., York, Pa.).

Not Acceptable

Hercules (Sears, Roebuck & Co.). Inferior installation and service work reported.
General Electric (General Electric Co.). See reasons given in text.

Vaporizing Burners

Not Acceptable

Marr (Franklin Oil Heating, Inc.). Also offered under the Westinghouse name in the East. Vaporizing type.

Wall-Flame Rotary Burners

As stated in the text, wall-flame rotary burners might be selected for certain small domestic boilers and furnaces in which gun burners would not be as efficient. Also, they might be used for maximum starting and running quietness. However, they are not as characteristically foolproof and durable

as gun-type burners. The following should be most satisfactory:

Timken Silent Automatic (Timken Silent Automatic Co., Detroit).
Fluid-Heat (Anchor Post Fence Co., Baltimore).
Toridheet (Cleveland Steel Products Corp., Cleveland).

Not Acceptable

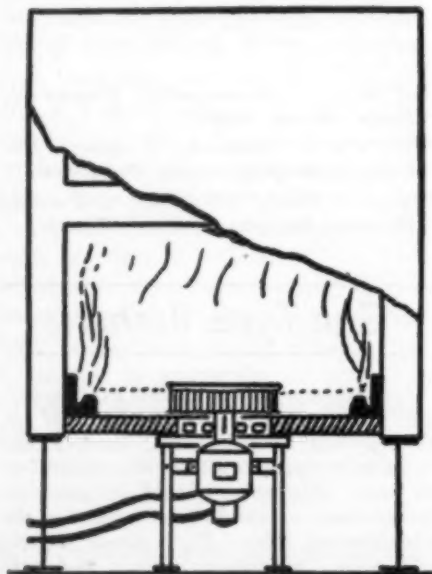
ABC Vertical Rotary Burner. Employs natural draft, has unusual high-speed motor. Electric ignition has given trouble but gas pilot is satisfactory.
Super Automatic Vertical Rotary Burner (Super Oil Heater Sales Co.). Employs natural draft. Electric ignition has given trouble.
Petro Horizontal Rotary Domestic Models. Air supplied by natural draft as well as by blower; tends, therefore, to emit smoke and gas into basement when starting with chimney cold. Less efficient than **Petro** gun-type burners; not successful with electric ignition; offered with less desirable gas-electric ignition.

Boiler-Burner Units

Ordinarily, because of their high price, these will be poor buys compared with combinations of good oil burners and good boilers designed for oil. Local competitive conditions may, however, change this. A maximum stack temperature of 500° F. should be specified by the prospective buyer, who should insist upon a guarantee that the maximum will not be exceeded.

Best Buys

Gar Wood (Gar Wood Industries, Detroit).
Quiet May (May Oil Burner Corp., Baltimore).



ROTARY-TYPE OIL BURNER

Also Acceptable

National-Williams Oil-O-Matic (National Radiator Corp., Johnstown, Pa.).
Delco-Heat Boiler (Delco Appliance Corp., Rochester, N. Y.).
Timken (Timken Silent Automatic Co., Detroit). Fired by gun-type burner.
Heil (Heil Co., Milwaukee).

Not Acceptable

General Electric Oil Furnace (General Electric Co.). The installed cost of size LA-4 is about \$700 for either a steam or hot-water boiler; of size LA-7 about \$900 for a steam or hot-water boiler. Unit consists of a welded steel boiler and integral oil-burning unit.

The design principles differ from those in any other boiler-burner unit on the market but its much-heralded efficiency has, in too many cases, not come up to the expectations woven by enthusiastic salesmen around the GE trade symbol. The boiler is almost impossible to clean and does get dirty despite the claim that combustion is so perfect that no cleaning is required.

It is most efficient when used in connection with a hot-water heating system, but when used as a steam boiler its efficiency, particularly at near maximum rated load, is lower than that of many of the conventional type units. Stack temperatures, by which efficiency is judged, are frequently so high as to char wood a few inches from the smoke pipe. Field tests by CU shows stack temperatures of 775° to 900°.

Bituminous Stokers

The following stokers are grouped in order of preference based on excellence of engineering and general construction, and efficient operation when properly installed. The first five, listed alphabetically, are among the best engineered now on the market.

Anchor Kolstoker (Anchor Stove & Range Co., New Albany, Ind.).
H. & H. (Holcomb & Hoke Mfg. Co., Indianapolis, Ind.).
Iron Fireman (Iron Fireman Mfg. Co., Portland, Ore.).
Stokol (Schwitzer-Cummins Co., Indianapolis, Ind.). Available with unique retort-agitator especially needed for certain coals.
Whiting (Whiting Corp., Harvey, Ill.).

The following stokers are well constructed. Order has no significance.

Butler (Butler Mfg. Co., Kansas City, Mo.).
Econocol (Cotta Transmission Corp., Rockford, Ill.).

CONSUMERS UNION Reports

The following are considered of good average construction. Order has no significance.

Auburn (Auburn Foundry, Inc., Auburn, Ind.).

Combustioneer (Steel Products Co., Springfield, Ohio).

Conco (Conco-Sampsel Corp., Belleville, Ill.). Regular line only. The light-weight Conco-Commander is not satisfactory.

Eddy (Eddy Stoker Corp., Chicago).

Free-Man (Illinois Iron & Bolt Co., Carpentersville, Ill.).

Gehl (Gehl Bros. Mfg. Co., West Bend, Wis.).

Kelvinator (Kelvinator Corp., Detroit).

Fairbanks Morse (Fairbanks Morse & Co. Chicago).

Findlay (Bluffton Mfg. Co., Findlay, Ohio).

Kol-Master (Kol-Master Corp., Oregon, Ill.). The Dial-Set models are exceptionally well designed and constructed.

Link Belt (Link Belt Co., Chicago).

Master (Muncie Gear Works, Inc., Muncie, Ind.).

Norge (Borg-Warner Corp., Detroit).

Plymouth (Plymouth Industries, Inc., Plymouth, Ind.).

Sevarge (Cameron Stove Co., Richmond, Va.).

Templux (Morse Chain Co., Detroit; subsidiary of Borg-Warner Corp.).

Tru-Temp (Sinker Davis Co., Indianapolis, Ind.).

Winkler (Winkler Mfg. Corp., Lebanon, Ind.).

Not Acceptable

Original Pocahontas (Pocahontas Fuel Co., Inc.). Has the only ash or clinker-removal device found in bituminous stokers, but is troublesome mechanically. Uses special coal.

Comet (Comet Electric Co.). An odd, unorthodox natural draft stoker. Gives com-

bustion trouble. Results not comparable with other modern stokers.

Loyal-Knight (Loyal Knight Mfg. Corp.). Lacks heavy construction and features for best service.

Stoker-Ola (Advance Appliance Co., Inc.). Skimpy, light-weight design not fit for heavy service.

Imp (V. M. Cruikshank Utilities). Unconventional design, with inadequate engineering development work, will in the opinion of heating experts give unsatisfactory combustion and erratic performance. Unlike other stokers it has not been designed for handling particular sizes and types of coal.

Anthracite Stokers

Any of the stokers listed alphabetically below can give excellent results with a good heating plant, and when installed and serviced by an expert stoker dealer. The list includes several relatively low-priced stokers capable of good performance and fair economy. Stokers noted as being especially well engineered can give unusually good performance and high efficiency when properly installed and adjusted, but cannot offset disadvantages of poor ability or workmanship on the part of a dealer.

Anchor Kolstoker (Anchor Stove & Range Co., New Albany, Ind.).

Burnwell (Burnwell Corp., Allentown, Pa.).

Cooper (Cooper & Cooper, Inc., Pittsfield, Mass.).

D. & E. (Dickson & Eddy, NYC). A good stoker available at especially low prices in some cities.

Electric Furnace-Man (Electric Furnace Man, Inc., NYC). In the opinion of some experts, this is the best-engineered anthracite stoker sold today; in most cities its additional cost is a sound investment.

Fairbanks Morse (Fairbanks Morse & Co. Chicago).

Fuel-Savers (Fuel Savers, Inc., Harrisburg, Pa.). Ruggedly built; capable of giving good efficiency and long-lived dependable performance. Prices fair.

Iron Fireman (Iron Fireman Mfg. Co., Portland Ore.). Anthracite models not up to the excellence of this company's bituminous models.

Link Belt (Link Belt Co., Chicago).

Motorstoker (Hershey Machine & Foundry Co., Manheim, Pa.). No. 10 available completely installed with bin-feed ash removal and one-year's service for \$275.

Newton (Newton Supply Co., Philadelphia).

Stokol (Schwitzer-Cummins Co., Indianapolis, Ind.). Anthracite model not up to the bituminous model. Heavy construction and excellent motor, transmission, &c., but only at par of other anthracite makes in its combustion.

Super-Stoker (Automatic Florzone Heating Co., Conshohocken, Pa.).

Not Acceptable

Freed (Freed Heater & Mfg. Co.). Some installations have poor records of trouble in motor-driven parts. Dealers seem educated by factory to be sales-opportunists to an extreme degree, rather than stoker installation and service experts.

Hercules (Sears, Roebuck & Co.). Made by same company that makes D. & E. stokers listed above. Sells at \$184.50 installed with one-year free service. Price includes no ash-removal device. This excellent stoker, at this price, would be a "Best Buy" except that Sears-Roebuck installation and service has proved in many cases, to be slipshod, pinch-penny and incompetent. The "service and installation experts" are often poorly paid, inexperienced mechanics.

Imp (V. M. Cruikshank Utilities). Erratic performance can be expected due to undeveloped, unconventional design and construction. See notes on Imp bituminous stokers.

Lead in Chalks—A Warning

AN heretofore unsuspected source of lead poisoning—colored chalks—has recently been revealed by the Ontario Dep't of Health. An analysis made by this body and published in the *Canadian Public Health Journal* showed lead chromate to be widely used as a pigment in yellow, orange and green chalk. (Crayons of these colors should also be looked on with suspicion, the report pointed out.) In some cases, the lead found in one stick exceeded the amount which has been known to cause fatal poisoning in a child. White, red, blue, brown and

black samples tested were found to be free of the metal.

The danger which chalk containing lead presents to young children—noted for their fondness for subjecting every available object to a taste-test—is apparent. But its use may also be hazardous to older ones because of the possibility that they may inhale lead dust when blackboards or erasers are cleaned.

Another possible hazard, in the case of school children, is presented by pencils. One physician has reported that the yellow paint on the pencils used by

his daughter proved on analysis to contain large amounts of lead.

Children, who are more susceptible to lead poisoning than are adults, should be protected insofar as possible against all sources of this metal. There are many deaths from lead poisoning among children. And in some cases permanent mental impairment results.

Of the children treated for lead poisoning in the children's hospitals of Boston in the 10-year period from 1924 through 1933, over one-tenth died and an even larger number suffered permanent injury.

Lighting Your House

Some notes to aid the homeowner in satisfying his lighting needs with a minimum of cost and trouble

by ALBERT MAYER

ILLUMINATION, whether it comes from daylight or artificial light, should provide "comfortable seeing conditions for varying purposes" and, less important, contribute to your home's appearance. In many homes, it does neither of these things adequately.

The criterion for adequate lighting is proper intensity for each particular activity, but there is a wide difference of opinion as to what these proper intensities are. Recommendations in this article are based on the following intensity levels approved by several impartial students: (1) for general illumination, 6 foot-candles; (2) for reading or sewing, 10-15 foot-candles; (3) for stairs and passageways, 2 foot-candles. (A 40-watt bulb placed at a distance of 26 inches will give about 10 foot-candles.¹)

Although these standards may fall short of those the utility companies are trying to recommend to the public, there seems to be no evidence that people with normal sight will see any better with more light. Your own judgment as to the amount you need to carry on various activities comfortably should be the ultimate criterion. If you desire, you can buy (for \$15 or \$20) an instrument to measure light intensity accurately, or possibly borrow one from your local lighting company.

Daylight Illumination

ADEQUATE daylight illumination, important not only in itself but also because it enables the owner to keep light bills at a minimum, depends upon intelligent planning of room location, window sizes and heights, orientation of the house and its distance from other buildings. The following points should be considered when

making your plans for a house or inspecting a new one:

1. *Proportion of window area to floor area of the room.* No accurate general statement can be made. It has been found, however, that in the latitude of Washington, D. C., a net glass area amounting to 15% of the floor area will give adequate illumination on a clear day² provided that the glass is not obstructed by drapes, window curtains, porch roof, &c. This means an overall window area equal to 17% to 18% of the floor space. (It is assumed that the requirements given below are met.)

2. *Height of top of window in relation to depth of room.* The higher it is, the deeper the light penetrates. Little effective light comes in near the bottom of a window.

² On December 21. From J. E. Ives' "Lighting for Low Cost Housing," U. S. Public Health Service Reports No. 1940; available from Sup't of Documents, Washington, D. C. 5¢. An excellent short pamphlet on the whole subject of illumination.

Our Common Ailment

BASED on the series of articles on constipation which attracted wide attention in the *Reports* last year, a new book by Dr. Harold Aaron, CU's medical consultant, will be published by the Dodge Publishing Co. on October 24. Title: *Our Common Ailment*.

Written in greater detail than were the articles, and incorporating much new material, the book deals with the causes, symptoms, types and treatment of constipation. The relation of diet, psychological factors and habit to constipation are analyzed fully; popular misconceptions are examined; laxatives and cathartics are discussed by brand name in terms of which ones are injurious, and which ones safe for occasional use.

A special edition for CU members will be available at the reduced rate of \$1.

Conclusion

MR. ALBERT MAYER's series of articles on the problems that face the homeowner, originally scheduled to end with this issue, has been extended to include one more instalment. In this final article Mr. Mayer will discuss some aspects of plumbing and heating and summarize the main conclusions of the whole series.

3. *Depth of room.* Excessive depth usually means inadequately lighted spaces in the rear.

4. *Location of windows and thickness of exterior wall.* A thick stone wall or a deep dormer window acts like a bottleneck or funnel so that the amount of light which can penetrate is greatly reduced—a drawback to many types of sloping roofs and period houses. In order to give the exterior a symmetrical appearance, windows on period houses must often be placed near corners, rather than at the center of the wall, or near it, which is usually the most effective location for lighting.

5. *Location of adjacent buildings.* If any house or other obstruction is close enough so that a line drawn from its highest point to your lowest window sill makes an angle of more than 45° with the horizontal, it will appreciably interfere with the amount of daylight you receive. A center room, no matter how many windows it has, will receive inadequate daylight unless the adjacent house is a good distance away or is of a color which reflects light well. Where plots of land are comparatively narrow, houses should be staggered rather than placed in a straight line all at the same distance from the street.

6. *Location of window over kitchen sink.* It should preferably face the north. It is also good on the south, and slightly less desirable on the east. Because of the glaring rays of the low afternoon sun, it should never face the west.

7. *Arrangement of furniture.* In order to avoid eyestrain, chairs frequently used in the daytime, or a baby's crib, should not face windows. A desk, if used for writing during the day, should be near a window and in such a position that the light will come over the left shoulder (to avoid

¹ See 1938 *Buying Guide*, p. 164, for candle power provided by bulbs of other sizes.

shadows cast by the hand and pencil). A dressing table should preferably be placed against a wall with windows in order that the face may be lighted and disturbing reflections avoided.

Wiring

PRECEDING the installation of wiring you must determine for what purposes you wish to use electricity. Its use for purposes other than lighting should depend in large part upon the local rates available. In many communities, cooking and refrigerating with electricity places your total current consumption into a much lower kilowatt-hour price. The initial cost of equipment—for example, the comparative prices of gas and electric ranges—should enter into your decision.

Insistence on a certificate of the National Board of Fire Underwriters on the materials used, on the character of installation and on the fixtures will assure safety and also adequate wiring for the number of outlets installed. This protection, of course, covers only that work done when the house is finished. Any later additions or changes made by yourself or an unqualified contractor constitute a possible fire hazard. All work done at any time should be covered by an Underwriters' Certificate.³

In addition to safety, the important points to check in relation to the wiring are as follows:

1. Separate circuits for heavy duty, e.g., range, refrigerator, electric iron or mangle. Minor equipment including vacuum, toaster, coffee percolator, &c., may be used on the lighting circuits.

2. Circuit for attic. Even though not used now, it may be later.

³ For those who wish to study further the subject of adequacy and safety of wiring the following references are suggested:

(1) *National Electrical Code of 1937*; available from National Board of Fire Underwriters, 85 John St., NYC. Free. Contains the standards on which the Fire Underwriters base their issuance of certificate of approval of materials and installation.

(2) "Wiring the Farm for Light, Heat and Power"; available from Committee on Relation of Electricity to Agriculture, 1120 Garland Bldg., Chicago. 50¢. Less technical and less comprehensive than the Code. Excellent photographs of installations.

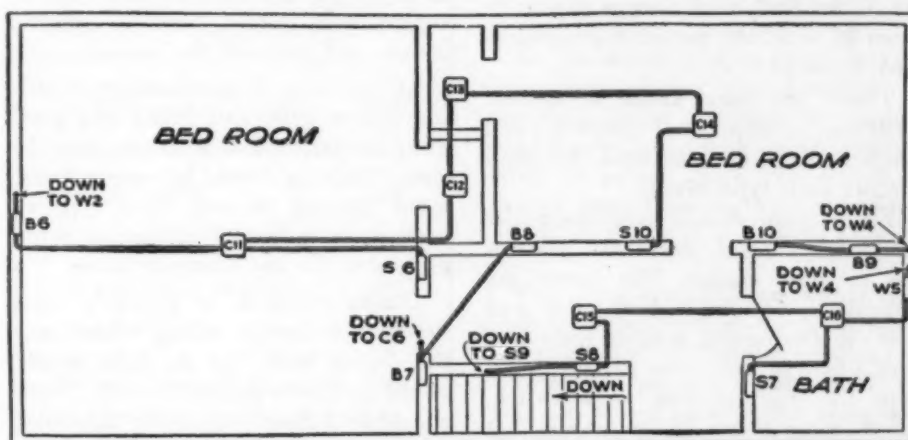
(3) "Wiring Simplified," by H. P. Richter, 10th Edition, 1938; available from Montgomery Ward. 29¢. Good illustrations.

3. Spare circuits on the panel board (fuse box) for future use—it is well to have one or more.

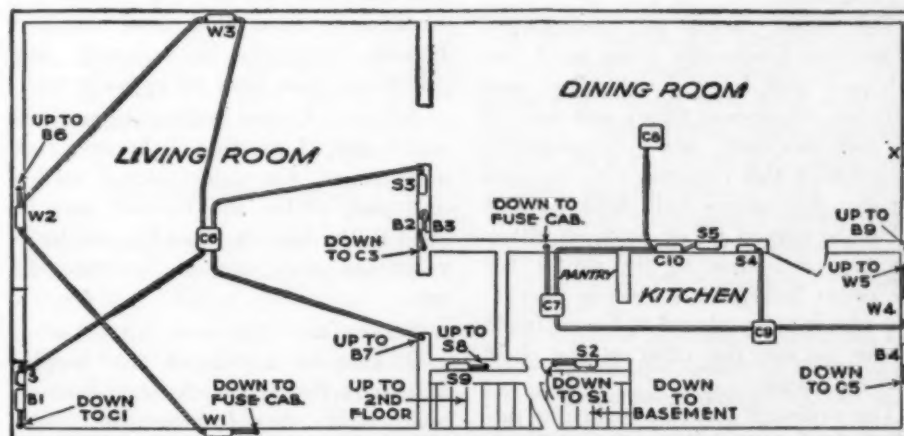
4. The panel board. It should be located so that fuses may be changed conveniently and should bear direc-

tions showing what lighting is controlled by each fuse. In addition, the electrician should leave a framed circuiting diagram so that future repairs or changes can be made without too much difficulty.

Wiring System in a Frame House



SECOND FLOOR PLAN



FIRST FLOOR PLAN

The two diagrams above serve to illustrate some features which are desirable in the wiring system, others which should be avoided. Ceiling outlets are marked C; wall brackets, W; switches, S; and base plugs, B.

FIRST FLOOR: The kitchen switch S4 is badly placed behind the door; it should be on the other side to be accessible when the door is opened.

In the living room, wall brackets W1, W2 and W3 will probably interfere with furniture and pictures; base outlets would be preferable. But note the convenience of "3-way" switches S and S3, controlling ceiling outlet C6

from both the entrance door and the door leading to dining room.

The dining room should have a floor outlet in the center of the room. Ceiling outlet C8 is controlled by switch S5; for convenience another switch ("3-way") should be located at door to living room.

SECOND FLOOR: In the bedroom adjacent to bath, base plugs B8 and B10 are badly located, since both are on the same wall. They should be on opposite walls.

In the bathroom, wall outlet W5 is adequate to light the room; ceiling light C16 is wasteful.

Location and Number of Outlets

YOU and your architect must determine the number of outlets which will be needed and their proper location to assure maximum convenience. As to number, the electric company's propaganda usually urges too many, and you yourself are apt to figure on too few. When put in at the time of wiring installation, the cost of an outlet in the New York area is generally from \$2 to \$2.50; put in after completion, from \$5 to \$7.

There are four kinds of outlet: switches, ceiling, wall bracket, and plugs in base, floor or wall. We shall discuss each type briefly.

Every room should have one outlet on switch control, decidedly preferable to pull chains. The latter are difficult to find in a dark room and pull out frequently, making their cost over a two- or three-year period higher than the original cost of a switch. Check your house plans to see that the switches are placed properly—on the side of the door, by the doorknob, for example.

For those rooms or passageways where you frequently come in at one entrance and leave by another, two switches (three-way type) one located by each doorway, are a convenience. Switches of this type can well be used for the downstairs hall light so that it can be turned off or on from either the top or bottom of the stairs; for the cellar light; for a built-in garage, one switch to be placed at the entrance to the garage, the other at the door into the house.

The ordinary tumbler switch is satisfactory, but the silent mercury type is more durable and only slightly more expensive.

Ceiling lights are used less than formerly, but it is recommended that they be installed for two reasons: (1) they are convenient for lighting a room when you first enter it; and (2) even though you do not want them, this may not be true of the next owner, should you sell.

The decline in use of wall bracket outlets is justified, for they interfere with flexibility in furniture arrangement; produce a glare if unshaded; and with shades are apt to give spotty illumination.

Plugs, whether situated in the baseboard, the wall, or the floor, should

be so spaced that one can never trip over lamp cords. The dining room should have a floor plug under the table; the kitchen and laundry should have wall plugs, just above the working surfaces. If you want a ventilating fan in the kitchen, provide an outlet near the window.

FOLLOWING are some recommendations for the number and type of outlets you should have in specific rooms and parts of the house:

Living room. A combination of ceiling fixture (100-watt bulb) and portable lamps, or lamps alone, may be used. Lighting should be semi-indirect. Cove lighting or any other type of completely indirect illumination is too expensive for the low-cost house.

Dining room. It is probably most desirable to have a ceiling fixture over the dining table, but its light should be diffused over the entire room. There should be a floor plug under the table; a base plug in addition is desirable.

Bedrooms. Probably a center light (60 watts for ordinary size bedroom); certainly a base plug from which a bedside lamp can be operated; one additional base plug on opposite wall.

Kitchen. Center ceiling light (100 watt) and, if possible, light over sink and range. Chromium-plated switch and plug plates and fixtures may be used in the kitchen, laundry and bathroom as they reduce maintenance cost.

Bathrooms. Light over mirror or on each side of mirror at face height, 5 ft. 6 in.; wall switch near door—a pull chain should never be used. Convenience outlets present shock hazards—electrical appliances should never be used in the bathroom.

Halls and stair halls. Steps should be well illuminated, especially at the top and bottom.

Closets. Deep closets should be lighted. Because of infrequent use pull chains may be used.

Correction — Raygram

THE Raygram Corp. was erroneously listed as the distributor of the *Rex* photographic exposure meter in the *August Reports*. The Raygram Corp. has no connection with the distribution of this product.

Cellar. Light at stair and over front of boiler; base plug for extension lamp. If you have a hot-air heating system, take care that the ceiling outlets are not placed over the ducts or so close as to make proper light distribution impossible.

Garage. Ceiling light above hood of car, base plug for extension lamp. A fixture outside the garage to light the driveway may be desirable.

Exterior. Lights at entrances illuminating the house number and any steps. A terrace or porch should have a ceiling or bracket light and at least one base plug. All exterior lights should be controlled by an inside switch to prevent possible meddling. Outlets and fixtures should be weather-proof.

Pilot lights, although not essential, are useful to show whether a little-used light in another location—cellar, attic or garage—has been left burning.

Fixtures and Lamps

DIRECT, indirect and semi-direct are the three methods of lighting. The direct type, in which the light comes from the source without reflection, causes glare and should be avoided. Indirect light, such as that provided by a ceiling lamp shielded by an opaque bowl, involves excessive current consumption and is difficult to distribute evenly unless an expensive method of installation is used. Semi-indirect, in which part of the light comes through reflection, part directly, is the preferable form. A ceiling fixture with a translucent glass bowl is an example of this type.

Fixtures should provide good light and good appearance. Manufacturers have almost totally neglected the first function and although they have made the second their chief objective, their failure to achieve it has been dismal. The only exceptions are kitchen fixtures which are generally satisfactory and, occasionally, those for the bathroom. Real beauty comes from the lighting, not from the fixture; therefore select equipment for your home on the basis of performance in terms of good light-intensity levels and distribution. Avoid tassels, painted shades, glass pendants, and similar gewgaws.

If your house is being erected by union workers, be sure to get union-

labeled fixtures. Union electricians as a general rule will not install any others.

In selecting ceiling lights some form of translucent glass bowl is best and much to be preferred to chandeliers which, because of the individual small lights, usually glare (this condition can be somewhat improved by shades). If the ceiling is beamed, hang the fixture lower so that the light will not be obstructed by the beams, or possibly use more than one light fixture.

Common defects of floor, table and bedside lamps are opaque shades or those which are entirely enclosed and therefore concentrate the light into a shaft. Another failing, which may be due to either the shape of the shade or the height of the lamp, is the visibility of the glaring bulbs from a sitting position. Lamps with bowl tops reflecting light to the ceiling are slightly better for general illumination, but they leave the lower levels imperfectly lighted unless high-wattage bulbs are used.

On the basis of the requirements of good illumination and the need to avoid the defects common to many types of lamps, the Illuminating Engineering Society has designed models called the IES standard. Manufacturers who conform to the standards set up are permitted to use the IES stamp.⁴ These lamps are well designed, but consume more current than is probably necessary. You can yourself select lamps which meet the essential requirements, by choosing translucent shades open at the top and determining the height of the lamps carefully so as to avoid glare.

It is practically impossible to design a piano floor lamp low enough so that the bulb is not visible and yet high enough to light the music. The best solution is to attach a small lamp to the music rack.

Exposed bulbs and shades should be dusted frequently since a two- or

⁴ The IES specification for the IES lamps also covers quality of construction and durability. The lamps included are: study and reading lamps (table and floor), end table lamp, semi-indirect floor lamp, indirect floor lamp. IES lamps using a special multiple-filament bulb (50-100-150 watt or 100-200-300 watt type) are not advised as the bulbs are expensive, the switch feature is of doubtful advantage, and the indirect type especially will be costly to operate.

Light and Color

THE color of the walls and ceiling of a room—and, to some extent, of curtains and large articles of furniture—is an important factor in determining how much electricity will be required to light a room adequately. The following table gives the approximate percentage of light reflected by various colors:

WHITE	80%
LIGHT IVORY or CREAM.	70%
LIGHT BEIGE	65%
YELLOW	65%
LIGHT BUFF or PINK....	55%
PALE GREEN	50%
GRAY MEDIUM	45%
ROSE	12%
DARK GREEN or BLUE..	10%

three-months' accumulation of dirt may decrease the light output by as much as one-third.

General Principles

THE householder should keep in mind several general principles of illumination. Glare, the result of intense light from small visible sources, should be reduced by the use of bulbs frosted on the inside and of shades which diffuse the light. Also to be avoided, because of possible eyestrain, are violent differences in the level of light in a room, such as that which occurs when a room is left in darkness except for the cone of light coming from a lamp with an opaque shade.

The level of lighting intensity in any part of a room should be adequate for the purposes for which the space is customarily used. Thus, for example, in the living room where one person may be reading, several more talking, and still others playing games, there should be a combination of fixtures and lamps which at minimum cost will give the light intensity and distribution suitable to each type of activity.

The evenness of light and its cost depend greatly on the amount of light reflected from walls and ceilings. The darker the room, the more difficult and expensive it is to light. Avoid colors with a reflectivity of less than 60% (see color chart).

Before selecting furnishings and wall and ceiling colors, try them out, if possible, both in the daytime and at night. Surprising differences in shade, sometimes even in color, occur. Also remember that a large surface will appear darker than a sample of the same color and that two colors placed next to each other change the effect of either alone, the degree of change depending on the comparative size of surface that is covered by each color.

There are several items which may well be considered at the time plans are made for the lighting system, although they are not a part of it.⁵ If you can afford to wire the radio and telephone outlets while the house is being built it is desirable to do so from the standpoint of appearance. It is not essential, however, since either can be wired on the surface.

The bell system, which may vary from a front and back door bell ringing in the kitchen with different sounds, to a bell from each room with kitchen annunciator, should operate on current transformed down from your regular current rather than on separate batteries which will run down periodically.

A reliable lightning-protection system should be considered in locations where dependable fire protection service is not available. It can be put into the average \$5,000 house in the New York area for slightly less than \$75. Since some systems increase rather than eliminate the hazard of lightning, be sure to insist on the Underwriters' certificate of approval of the entire installation, not merely of the material used.⁶

⁵ A few sections of the country still have direct current. If you have a-c equipment and are moving to a d-c neighborhood, or vice versa, the cost of making the necessary changes on your appliances or replacing them will be considerable. Check this cost item before moving.

⁶ For more complete information on lightning protection see Farmers' Bulletin No. 1512, U. S. Dept of Agriculture; available from Sup't of Documents, Washington, D. C. 5¢.

★ The Staff Reports ★

The A.M.A.—Maybe & Maybe Not

FACED with a rapidly crystallizing public demand for more and better medical service, with impending executive, judicial and legislative action by the Federal Government, and with growing restlessness in its own ranks, the officialdom of the American Medical Ass'n on September 16 convened its official governing body in special session.

Only twice before in the A.M.A.'s history of nearly a hundred years has the House of Delegates met in special session, once during the World War and again when the New Deal's Social Security Act was passed. Democratically elected in theory, but machine controlled in fact, the House carried out its orders.

Widely heralded as a partial capitulation to public demand, the actions of the House constitute official recognition of some of the plans for medical service already in existence. Its decisions in other respects are for the most part hedged about with such limiting conditions as to make them of dubious value.

The A.M.A. officially approved the principles set forth at the National Health Conference for the expansion of Public Health and Maternal and Child Health Services, and offered to cooperate in putting them into effect. But a proviso tacked on to this approval stipulates that "Any expenditures made for the expansion of public health and maternal and child health services *should not include the treatment of disease* [italics ours] except so far as this cannot be successfully accomplished through the private practitioner."

The House of Delegates approved the principle of hospital service insurance, but stipulated that "these plans should confine themselves to provision of hospital facilities and *should not include any type of medical care* [italics ours]."

Voluntary indemnity insurance, long provided by insurance companies, was favored by the House. Compulsory health insurance, recommended at the National Health Conference, was condemned in no uncertain terms. Local control and administration of all government-subsidized health schemes was repeatedly endorsed. That local control would inevitably lead to widespread sabotaging of any effective national program was apparently not discussed.

The A.M.A. did in a measure agree that medical care in some communities may need to be supported by the government; it did endorse the principle of compensation for loss of wages during sickness; it did favor expansion of general hospital facilities "where need exists." And in doing so, it seems fair to assume, the A.M.A. indicated that even it is eventually responsive to the trend of the times.

But tactics of apparent capitulation have been used by the A.M.A. before. Maybe the House's actions mean something, mild and restricted though they were; and maybe they don't. Certainly the A.M.A.'s hierarchy will have to follow up words with deeds before suspicion can relax.

Meantime, on other fronts, the A.M.A. is active in the old familiar ways.

The legal action of the Ass'n to prevent the Group Health Association in Washington, D. C., from providing medical service to government employees, has been resumed after a preliminary defeat for the A.M.A. in the courts. And, as recently announced, proceedings of the Dep't of Justice against the A.M.A. and its constituent District of Columbia Medical Society will continue before a Federal Grand Jury.

The Medical Society and the A.M.A., the government charges, have sought to restrain free competition in the practice of medicine by coercing or expelling physicians who aided the Group Health Association in supplying medical care to its members. There is, certainly, nothing relaxing to suspicion in that.

A Question for CU Members

CU's staff would like an expression of opinion from CU's members on a matter of policy. The manufacturer of a product we rated "Not Acceptable" recently has asked that we retest the product at his expense. He does not dispute the correctness of our rating. But he maintains that the product has since been changed and improved.

The product is not one frequently bought by consumers. Therefore, the regular testing schedule does not call for retesting in the near future. And CU cannot now afford to run a special test. Being informed of this, the manufacturer has offered to pay all costs of a special test—CU to conduct it, control it, and publish whatever findings might emerge.

How do our members feel about this? Would they approve of our accepting the manufacturer's offer? Would they prefer that we do not? The test would be unaffected by the manufacturer's payment. But would the simple fact of his payment lead to doubts on this score?

We urge our members to consider the question and write us their opinion. If any appreciable proportion of our members are opposed to such an undertaking we will not consider it further.

Consumers Union of United States, Inc.

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